The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees.

VOL. XXXVI. CHICAGO, ILLINOIS, APRIL 27, 1901. No. 17.

Original Articles.

NOTES ON ADRENALIN AND ADRENALIN CHLORID.*

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CHICAGO.

During the first week of January, a well-known manufacturing house sent me some of the active principle extracted from suprarenal glands, in powder known as adrenalin, and in several solutions varying from 1 to 1000 to 1 to 10,000 of the chlorid of adrenalin in distilled water or in normal salt solution. I experimented with this on numerous cases, and kept careful records until I became satisfied of its activity. In Cases 1, 2, 3, 4, 6, 9, 11, 12 and 17, I applied a very small quantity of a spray of one part of chlorid of adrenalin to 10,000 parts of water to the nasal cavities, with the effect of blanching the mucous membrane quickly, and in most cases of causing contraction of the swollen tissues in the same way that they are contracted by applications of cocain. The first solution that I used was made with distilled water, and in Cases 2, 3, 4 and 9, it caused smarting, which in one case was intense. I wrote to the firm about this, and they suggested that I employ, instead, the solution of adrenalin in normal salt solution. After using this there was no more smarting excepting in two or three instances where I was led to believe that a little formalin remained on the end of the atomizer, which had been washed in a strong solution of formalin after being used in another case; indeed, the smarting in some of the previous cases may have been due to this cause, for it is my custom always, after using an atomizer, to wash it thoroughly, then dip it in a strong solution of formalin and put it away without wiping.

Dr. S. A. Friedberg, one of my assistants, used the same solution in several cases, and reported that he thought its effects were considerably less than those obtained from a solution made by macerating and filtering 30 grains of the desiccated adrenals to the ounce of water. This preparation I have used with much satisfaction for a couple of years. It is fairly stable, lasting from two to four months without material change. The formula is as follows: Adrenals, ℥i; boric acid, grs. xvi; aqua cinnamomi, ℥iv; aqua camphoræ (hot), ℥i; glycerin, ℥i; aqua dist. (hot), q. s. ad ℥ii.

In Cases 5, 7, 8, 10, 13, 15, 26 and 27, I used a powder containing 1.5 per cent. each of biborate of soda and bicarbonate of soda and 3 per cent. of the light carbonate of magnesia with one part of adrenalin to 5000 of sugar-of-milk. I found that when the nasal cavities were stopped by swelling of the turbinated bodies, this powder cleared them out quickly, and in most instances they remained open for a considerable length of time, but in Cases 7, 26 and 27 the nose stopped up again within a few minutes, whereas, when sprayed with the solution made with 30 grains of the desiccated adrenal glands to the ounce of water, it would remain open for several hours. In Case 15, it was found that the powder, which was used daily for about three weeks, would usually open the nose quickly, and this would remain for several hours, but it seemed to cause some insomnia. I have used a similar powder mixed in various proportions with mildly astringent or antiseptic powders, in several nasal cases, with the effect of opening the nares when obstructed by swelling, and diminishing the secretions decidedly.

In Case 28 the patient had suffered from epistaxis almost daily for several weeks. I gave her a solution of adrenalin, 1 to 10,000 parts of water, to be used as a spray three or four times daily. As the result, she has had no nose bleed for over three weeks.

In Cases 29 and 30 I used the solution of adrenalin with 8 grains of boric acid to 5000 parts of water, as a spray in the nasal cavities, with the effect of opening the cavities immediately, when they were closed by swelling, and keeping them free for several hours. I have used the same spray in several other similar cases with good results, but did not keep accurate memoranda.

In Case 14—a patient who was under my care for nasal trouble—the conjunctiva became very much congested from over-use of the eyes. I gave him a solution of one part of the adrenalin to 10,000 parts of normal salt solution. This was dropped into the eye with the effect of blanching it completely within three or four minutes. At the end of five hours the congestion was about three-quarters as bad as it had been before; more of the solution was dropped in with the same effect as previously. The pupil was not at all affected. The disagreeable feeling of the eyes immediately disappeared. One hour later congestion was about one-half as bad as it had been when the solution was first dropped in. Another application was made with the effect of blanching it promptly. In this case the remedy was used several times afterward, and the conjunctivitis speedily disappeared, the patient in the meantime being able to use his eyes with little discomfort. There was no smarting from this application.

In Case 19 there was congestion and swelling of the conjunctiva and lids, such as the same patient had experienced several times in the beginning of attacks of hay-fever. In this case one or two drops of the 1 to 5000 solution of adrenalin in normal salt solution were employed, with the effect of removing the congestion in two or three minutes. About three hours later the congestion had reappeared and another application was made, blanching it at once. The swelling of the lower lid was also considerably reduced by these two

* Read before the Chicago Laryngological and Climatological Society, Feb. 28, 1901.

applications. The uncomfortable smarting sensation, which was associated with the congestion and swelling, was relieved within a very few minutes after the application. About four hours after the second application the congestion began to reappear and another application was made in the evening. The next morning there was still a little redness and swelling of the lower lid, but no congestion nor swelling of the conjunctiva. A couple of applications were made this day and by night the conditions were normal.

In Case 20 a small amount of formalin was accidentally sprayed into the eye with the atomizer, which contained one part of adrenalin to 10,000 parts of normal salt solution; very great smarting and intense congestion speedily followed, but was relieved in three or four minutes by dropping into the eye 2 or 3 minims of a 1 to 10,000 normal salt solution. About six hours later the eye again felt badly and I applied to it a minim of 1 part in 5000 normal salt solution; blanching occurred in a minute. The next morning the eye was still somewhat congested, though much improved, and the inflammation was practically aborted, though the solution was applied two or three times during that day, and the eye was then perfectly well.

Case 16 showed congestion of the upper part of the larynx—above the cords—of about 25 per cent. I applied a solution of 1 to 10,000; this reduced the congestion about one-tenth within three minutes.

In Case 22 I applied a similar solution once to a congested larynx and reduced the congestion about three-quarters.

In Case 23—chronic laryngitis with a congestion of about 20 per cent.—I applied a 1 to 10,000 in normal salt solution two or three times. In the course of five minutes the congestion had been considerably reduced, but the throat had closed so that it could not be applied very thoroughly to every part, and only the parts actually touched by the spray were found to be blanched, while those it had not touched were of the same degree of congestion as before. From the parts that had been touched, about one-half of the congestion had been removed. In several other cases it was noted that the blanching process did not extend at all beyond the part actually touched.

Case 18, acute laryngitis with edema of the glottis, occurred in a patient of Dr. O. T. Freer, whom he referred to me at the Presbyterian Hospital. There was great swelling and redness of the epiglottis, with difficult respiration which seemed likely to necessitate a speedy tracheotomy. I directed the interne, Dr. Smith, to apply to the larynx, every three or four hours, a spray of one part of adrenalin to 10,000 normal salt solution. This was done with the effect of giving the patient speedy relief. He said that he felt as though the parts had been contracted. In addition to this treatment the patient was given ¼ gr. of nitrate of pilocarpin, which caused free salivation and profuse sweating. This was repeated twice a day for two days, therefore we can not tell just what the influence of the adrenal was; however, its immediate effects were good, as demonstrated several times. The patient made a speedy recovery.

In Case 25 the fauces were congested about 20 per cent., and I applied a spray of 1 to 10,000, but at the end of five minutes the blanching was hardly perceptible.

In Case 24, one of acute coryza, the nose was sprayed four or five times with a 1 to 10,000 normal salt solution, resulting in a speedy cure.

In Case 26, chronic laryngotracheitis with acute exacerbation, the cords were congested about 25 per cent. In this case I applied a 1 to 1000 in normal salt solution, which speedily reduced the congestion about three-fifths. The patient said he felt a drawing or astringent sensation in the throat; there was no smarting, and he seemed decidedly improved. The throat felt very much better for the next eighteen hours. A few hours later, when I saw him, the congestion appeared about as great as on the previous day. I made the same application again, with an air-pressure of about 40 pounds, but after waiting several minutes I found that there was no apparent blanching of the mucous membrane, and the patient did not feel the astringent or drawing sensations which he had noticed the day previously. Concluding that the failure arose from using too great force, I made two applications of the same solution, with 15 pounds of pressure about five minutes apart, and five minutes afterward found that at least four-fifths of the congestion had been removed. The patient said that the larynx felt very much better.

In Case 31, of subacute laryngitis with marked congestion, I applied a solution of 1 to 5000 in normal salt solution containing also 8 grains of boric acid to the ounce. It gave the patient very great relief, and for several hours he found his voice much better. The next day the larynx was much improved and a similar application was made. The following day he was practically well.

I have used this solution several times in preparing for operations in the nose, and have found that 1 to 5000 acts with about the same rapidity and intensity as the solution made with 30 grains of the desiccated adrenal glands to an ounce of water. In solutions of 1 to 5000 in normal salt solution, which were opened frequently, I found that a fungus formed at the bottom within a few days, but this has not yet appeared at the end of several weeks, in solutions made with 1 part of adrenalin to 5000 of liquid containing 8 grains of boric acid, 2 drams of cinnamon water, 2 drams of camphor water and 4 drams of distilled water. From the experiments thus far made, I am satisfied that this remedy will be of great value in the treatment of acute inflammatory affections of the nasal cavities either in sprays of about 1 to 5000, or in powders of from 1 to 5000 to 1 to 2500 of sugar-of-milk. These may be used several times daily, and we may confidently expect that in the majority of cases they will promptly remove the congestion and swelling, and that they will keep down the swelling for two or three hours or more. In acute coryza and in hay-fever, I have reason to believe we will get great relief from a solution of gr. 1/10 of adrenalin chlorid in camphor water or in equal parts of camphor water and distilled water with about 8 gr. of boric acid to the ounce. In epistaxis from various causes, a similar solution used several times a day will undoubtedly be productive of very great benefit, and in many cases it will speedily effect a cure. In acute inflammation of the fauces, it is probable that solutions of 1 to 1000 would have good effects, but the weaker solutions, such as were used in the nares, are of little value. In acute and subacute rhinopharyngitis, from the experience already obtained, I have reason to believe that great benefit will be found from using a spray of 1 to 5000 four or five times a day. In several cases in which I have already used this remedy in chronic rhinitis, the secretions have been markedly checked, though I can not tell what the result will be. In acute or subacute laryngitis, I believe that a solution of 1 to 1000, applied with moderate force, will give very great relief, and it

appears to me probable that, when applied to acutely congested cords, in vocalists, it will reduce the swelling and congestion so thoroughly that the voice may be used for two or three hours with comparative ease, and possibly with normal efficiency.

HYPOSPADIAS.

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Hypospadias of some degree is one of the most common malformations of man. According to Rennes, Kaufman and others this deformity occurs in one of every 350 males.

There are several theories as to the cause of this condition. Some claim that from atresia of the urethra there is fetal retention of urine and finally a giving way of the urethra, or that the same result is caused by a delay in the development of the glandular urethra. The most probable is that of Reichel, who states that hypospadias is merely an arrest of development and the degree of deformity is an indication of the period of intrauterine life at which it occurred. Perineal openings develop in the sixth or seventh and glandular from the twelfth to the sixteenth week.

The more common variety is the glandular or balanic, in which the urethral opening is situated back of a broad, flattened and curved glans, the frenum being absent. The penile type of hypospadias opens at some point between the scrotum and glandis corona. The scrotal variety is presented by those cases with the urethral opening at the junction of the penis and scrotum, called peno-scrotal or in the extreme cases perineo-scrotal in which the scrotum is divided.

There is no malformation which may be the cause of more mental suffering and physical discomfort than the one under consideration, the trouble being none the less from its secret nature. A limited number have some degree of incontinence and many are compelled to pass the urine in a sitting posture from the difficulty of directing the stream. In many cases the urethral opening is so small that there is difficulty in evacuating the bladder. The penis, from imperfect development of the corpus spongiosum, may be deformed, curving downward and at times adherent to the scrotum, perfect erections or coitus being impossible; and the majority of even the balanic type of cases are sexually impotent. It is a matter of interest in this connection that several aboriginal tribes of Africa and Australia make a fistula or slit in the urethra to prevent impregnation.

Operations.—There are several methods of operation for the relief of hypospadias, which Van Hook classifies according to the principles involved: 1. The method of simple canalization. 2. That by denudation and suture. 3. That by the use of penile flaps. 4. That by taking flaps from the abdomen or scrotum. 5. That by the combination of these fundamental methods. To these must be added a sixth: That by mobilization and dislocation of the urethra.

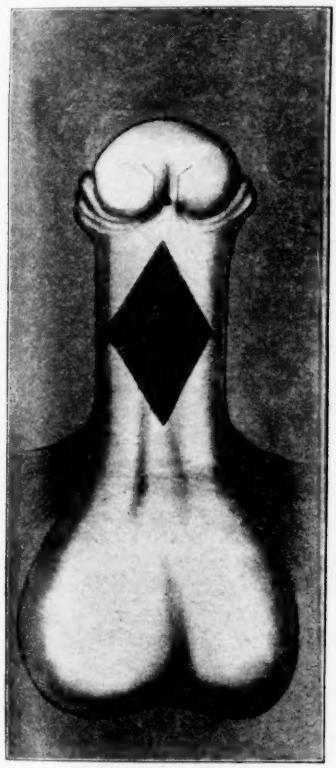

Fig. 1.—Duplay and Bouisson.

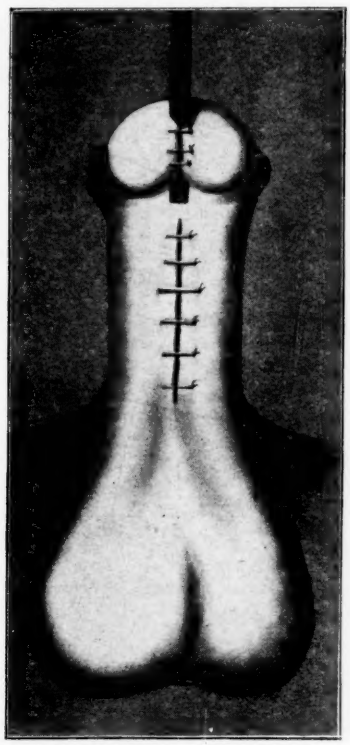

Fig. 2.—Duplay and Bouisson.

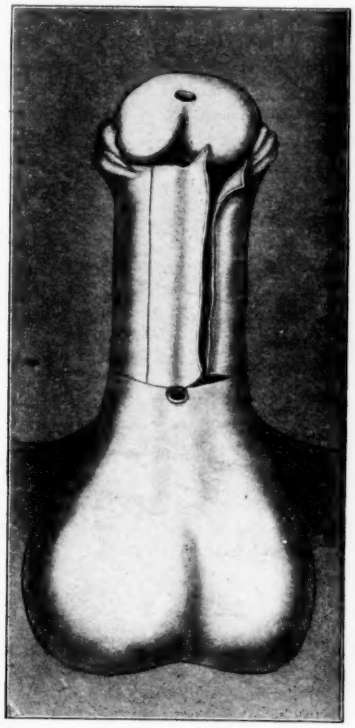

Fig. 3.—Duplay.

The operation of Dieffenbach, first made in 1838, consisted in piercing the glans penis from its summit to the normal urethra, and allowing a canula to remain in position until the canal became lined with epithelium, the previous opening of the urethra being closed. This operation was abandoned from the difficulty of maintaining the lumen of the canal when formed. Dieffenbach was also a pioneer in the operation by denudation and suture. The flap operation of Duplay has until recently been the one most commonly employed. The first step was Bouisson's principle (Fig. 1), to straighten the penis by transverse incision at the point of greatest curvature and, after straightening the organ, to close the lozenge-shaped defects by skin grafts or sliding flaps. (Fig. 2.) The age of choice for this operation is 4 years.

The second step is the formation of the new urethra

over a catheter to a point in front of the hypospadic opening. This is done by an incision on each side of the urethral groove, leaving a strip about one-half an inch wide which is dissected one-fourth its breadth toward the median line from each side and folded over the catheter. (Fig. 3.) Transverse incisions are made

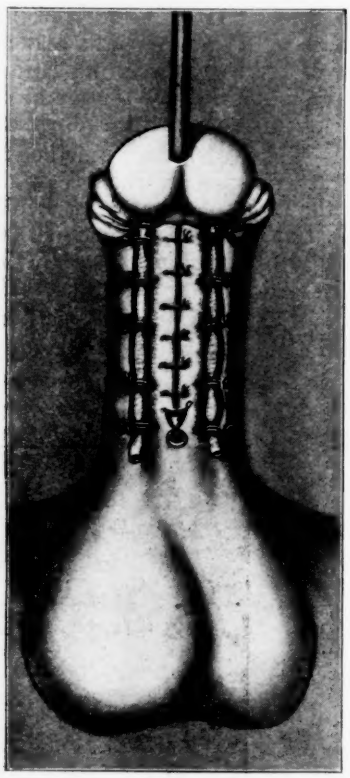

Fig. 4.—Duplay and Thiersch.

at the ends of the urethral incisions and the outer flaps dissected freely and closed over the catheter and new urethra by quill suture and accurate coaptation of the skin margins. (Fig. 4.) The lateral flaps were

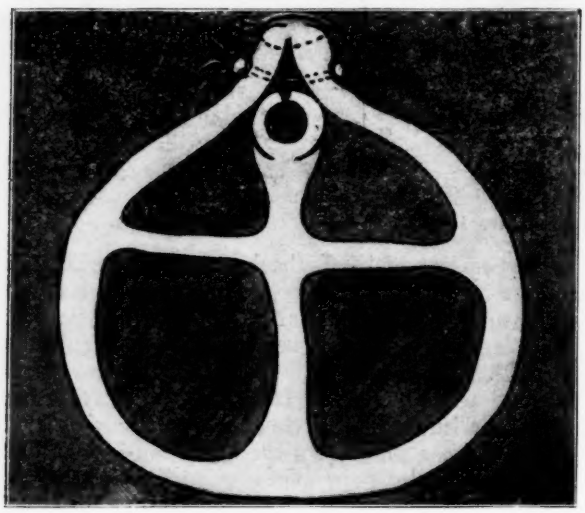

Fig. 5.—Duplay and Thiersch.

devised by Thiersch, Duplay making use of a flap of prepuce to cover the defect and new urethra. The glandular urethra is often constructed at the first operation. The age of choice being 5 or 6 years. (Fig. 5.)

The third step is the union of the two urethras, done by freshening the openings and accurate suturing; this operation is best made at the age of puberty, to secure the aid of the patient in after care. Thiersch devised the method of double penile skin flaps, the base of one being near the urethral groove, the other on the opposite of the penis. (Fig. 6.) Flaps are dissected up and one turned skin side in, to form the urethra, the other drawn over the urethra and sutured to the opposite side of the penis. (Fig. 7.) Thiersch also deserves credit for temporarily deflecting the urine by a button-

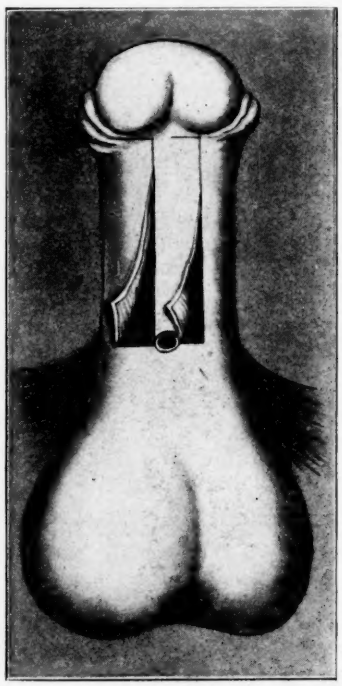

Fig. 6.—Thiersch.

hole in the perineal urethra, which he used in epispadias.

In the Wood method (Fig. 8), a large button-hole is made in the center of the prepuce near its attachment

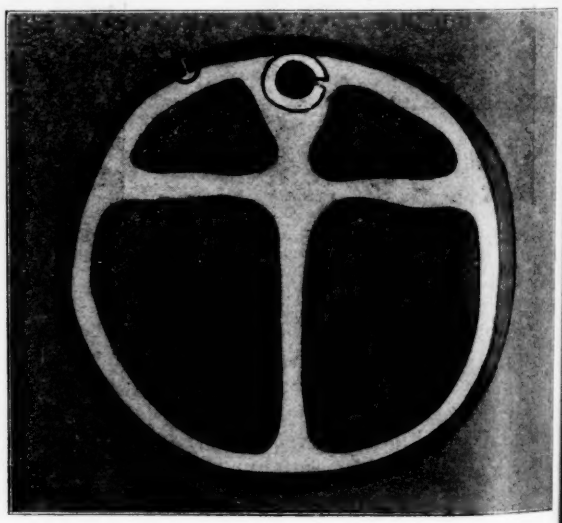

Fig. 7.—Thiersch.

and the glans drawn through the opening, leaving the prepuce underneath the glans. A skin flap with its base close to the urethral opening is turned up from the scrotum. (Fig. 9.) Two narrow strips are denuded from either side of the urethral groove and the scrotal flap sutured to these. The scrotal defect is closed

sutures and the flap is covered by the prepuce which is unfolded for this purpose.

Beck, in his peno-scrotal cases, utilizes the Duplay method (Figs. 10 and 11) and covers the new urethra with a scrotal flap like the Wood operation by twisting the pedicle to turn the skin surface out. (Fig. 12.)

hypospadias by Landerer and Bidder, who denuded strips on the under side of the penis (Fig. 13) and sutured to incisions in the scrotum (Fig. 14), then, when healing was firm, dissection of the penis with its new canal from the scrotum and skin grafting or turning the skin margins over the defects in surface cover-

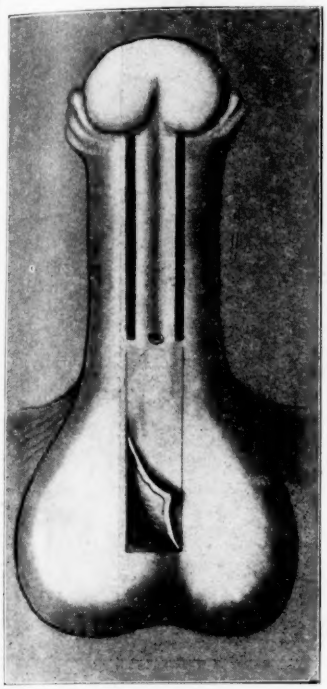

Fig. 8.—Wood

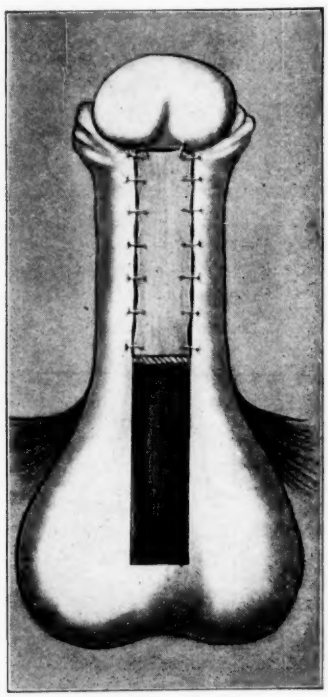

Fig 9.—Wood.

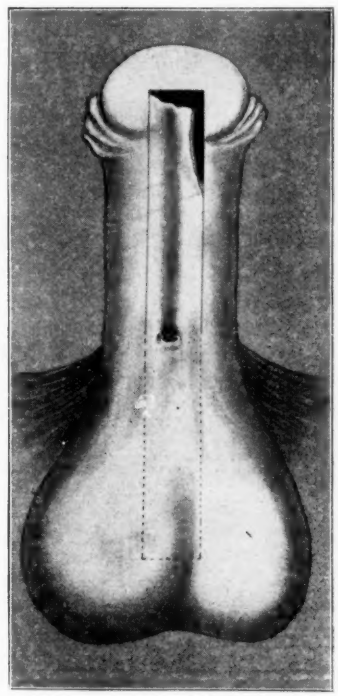

Fig 10.—Duplay, Wood and Beck.

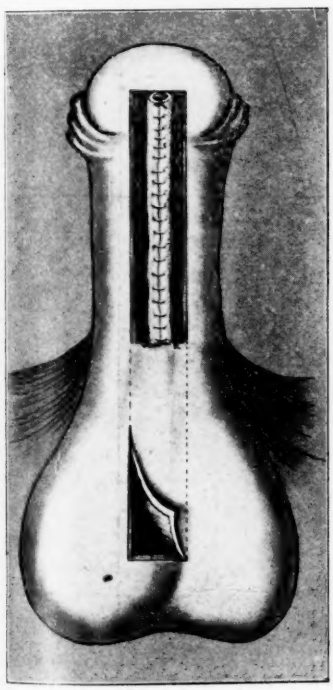

Fig. 11.—Duplay and Beck.

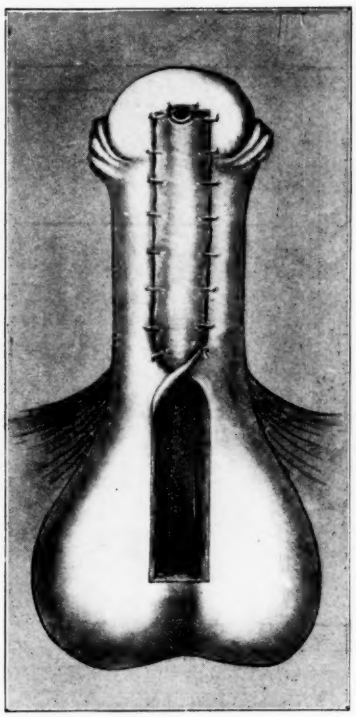

Fig. 12.—Beck.

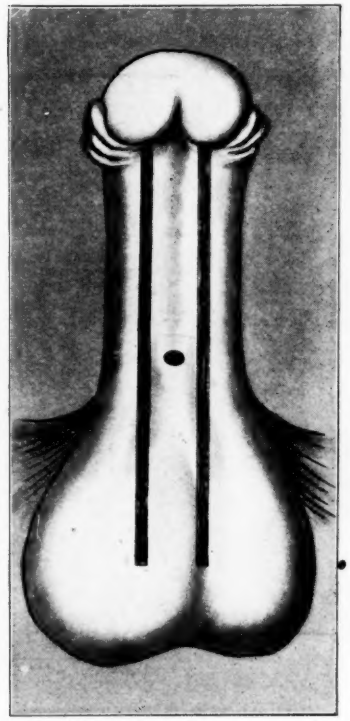

Fig. 13.—Rosenberger, Landerer and Bidder.

Rosenberger's operation for epispadias is made by incisions and denuding strips each side of the urethra, which are continuous with and sutured to similar denuded surfaces upon the abdomen, and later the organ with attached skin is separated from the abdomen and the denuded skin grafted. This method was so commonly successful that the principle was utilized in ing. This operation leaves considerable deformity, but has fewer failures than many of the earlier ones.

Causes of Failures.—There are several causes of the frequent failures experienced by all operators in this class of surgery. The field of operation is difficult to render sterile. Flaps are made too small and closed under tension; dressings become soaked with urine.

The bladder is drained by a catheter fixed in the canal and, after the third day, there is the straining of an irritable bladder which frequently expels the catheter, or forces out urine along side of the instrument. Frequent erections are also a cause of much discomfort. In a considerable number of hypospadiac cases operated on in Czerny's clinic, about 35 per cent. of them were uncured from the patients' lack of persistence in having repeated operations, and 29 per cent. of the operations

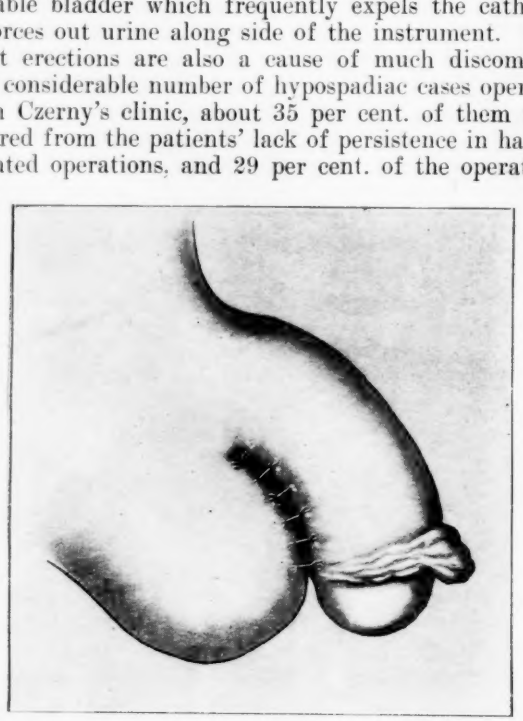

Fig. 14.—Rosenberger, Lauderer and Bidder.

were failures from failures of previous operations, not counting cases healed with minute fistulæ requiring cautery or caustic for their closure. Dr. Carl Beck of

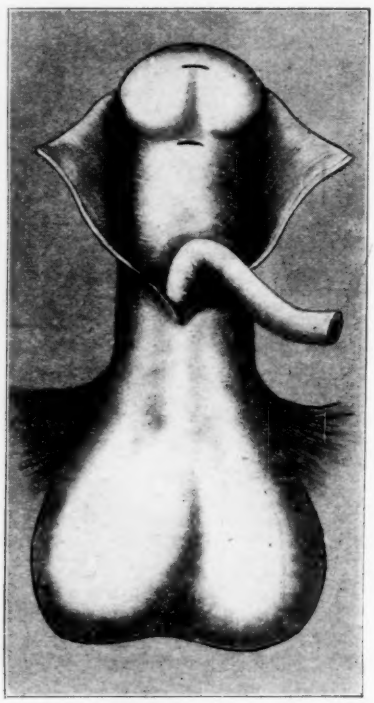

Fig. 15.—Beck.

New York, in 1897, and shortly afterward Professor Von Hacker in Europe, devised a new operation for the relief of the balanic type of hypospadias and for the penile cases with an opening near the glans. The distensibility and extensibility of the organ with all its structures furnished a basis for the operation. It is well known that the penis in a state of erection is nearly double its length when flaccid, the corpus spongiosum and urethral walls containing much elastic tissue. The Beck operation consists in completely mobilizing sufficient urethra to extend to the position in which it is

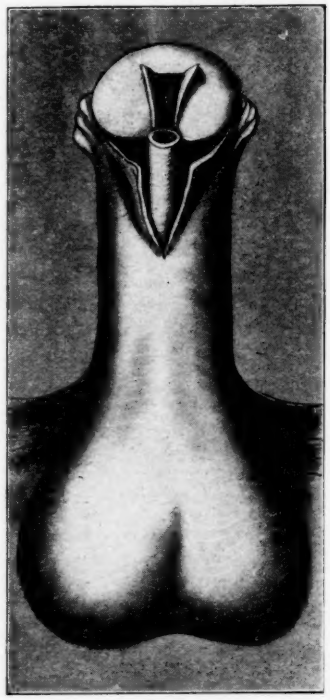

Fig. 16.—Beck.

wished to place the meatus. (Fig. 15.) The urethral site on the glans is freshened and made of sufficient

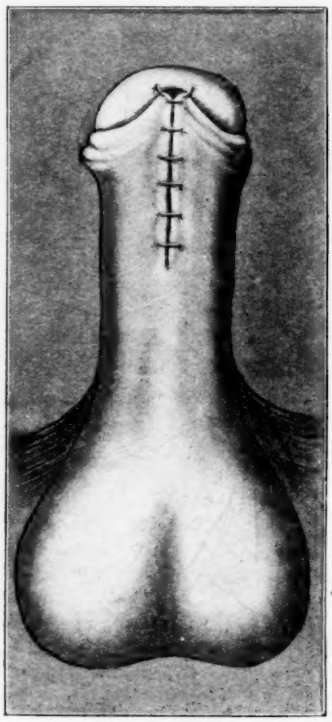

Fig. 17.—Beck.

depth to close the glans over the tube of urethra. (Fig. 16.) The urethra is exposed by an incision well back along the penis and is freed from its bed and its opening sutured to the glans. The incision is closed by sutures which also serve to build a frenum by attaching the freshened prepuce to the base of the glans penis. (Fig. 17.) When there is a shallow groove

and little deformity, the glans may be tunneled with a narrow bistoury or trocar and the tube of urethra drawn through and sutured to the opening on the surface of the glans. (Fig. 18.) The advantages of the method are many. The total length of urethra is normal in its mucous membrane. There is no catheter needed, patients pass urine freely during the healing process, and the wound pursues a normal course of repair free from urinary contamination.

The operation may be performed in cases of mild degree at a very early age. Dr. Beck has operated successfully on one infant of 5 months. While this operation is probably the best one possible for a certain class of these malformations, it must be combined with some other method to make it useful in relieving most of the penile, peno-scrotal and perineo-scrotal cases.

The 1899 report of the Heidelberg clinic presents

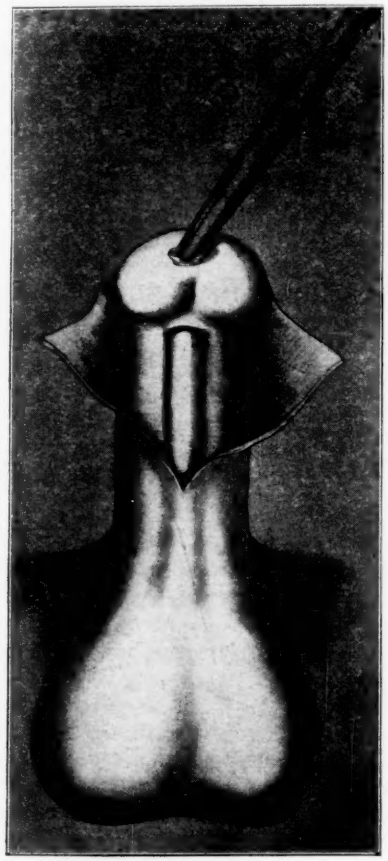

Fig. 18.—Beck.

three cases of hypospadias treated by the Beck method, in all of which the retraction of the dislocated urethra curved the glans downward and the meatus delivered its stream below as previous to operation, thus giving theoretical but not practical relief. According to a later report from this clinic, with a total of seven cases, better results had been achieved. Dr. A. J. Ochsner, to a great extent, relieves this downward contraction resulting from the Beck operation, by tunneling the glans at a higher point and bringing the urethra through it, locating the meatus above the apex of the organ. Bardenhauer has been credited with the tunneling by trocar instead of knife, but this was done by Dieffenbach in 1838. Any surgeon who has had experience in this class of surgery feels the necessity of having at his command several methods of procedure, and is well pleased if he can restore the functions of the organ as a whole, regardless of cosmetics, by means of one or a part of several operations. The prepuce in cases of hypospadias is usually redundant and situated on the dorsal surface, overhanging the glans like a hood. The skin of the penis is noted for its thinness, having no adipose tissue, also for its looseness of attachment and elasticity. Where it is folded upon itself at its cervical attachment its character very nearly resembles mucous membrane. For the past four years we have utilized this membrane to build the tube of urethra in such cases as could not be relieved by the operation of Beck used alone. The principle of a urethra of prepuce was devised by Van Hook.

The prepuce is extended as for circumcision and two incisions are made, about 1 inch apart, extending from its free border to its attachment at the penile cervix; the prepuce is unfolded, forming a loop of thin skin about 2½ inches in length. Should this not be considered sufficient to reach from its attachment to the hypospadiac opening, the two incisions are extended back along the dorsum of the penis until sufficient tissue is obtained, when the two incisions are connected by a transverse one, and the flap of skin lifted but left attached to the cervix by the inner surface. Several

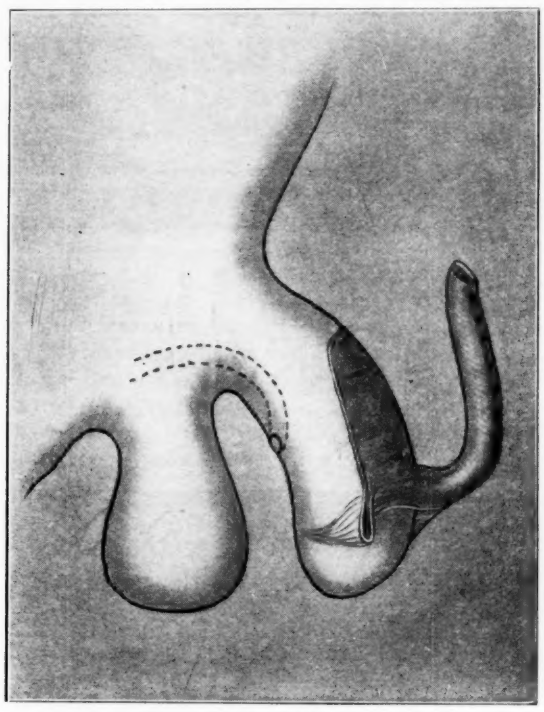

Fig. 19.

sutures now close the lateral integument of the penis over the denuded area. (Fig. 19.)

The pediculated flap of prepuce is constructed into a tube with its skin or outer surface inside, by means of a number of catgut sutures. The penis is tuneled by means of a narrow bistoury or medium trocar and canula, through the glans, above its groove, along the penis to a point beneath the hypospadiac opening, when it is made to emerge at one side of, but close to, the urethra; the tube of prepuce is drawn through the tunnel and sutured where it enters the glans and also where it emerges. (Fig. 20.) At the end of ten days the flap of pedicle is cut through close to the new meatus. The second operation, made at a later period, consists of a perineal opening into the urethra and insertion of a Jacobs' self-retaining female catheter; this is the least irritating and can be left as long as needed, usually from five to eight days. An incision

at the termination of the two urethras now admits of accurate coaptation by sutures, or the normal urethra may be mobilized (Beck method) to a sufficient extent to admit of its insertion into the caliber of the new urethra, where it is held by sutures and the external

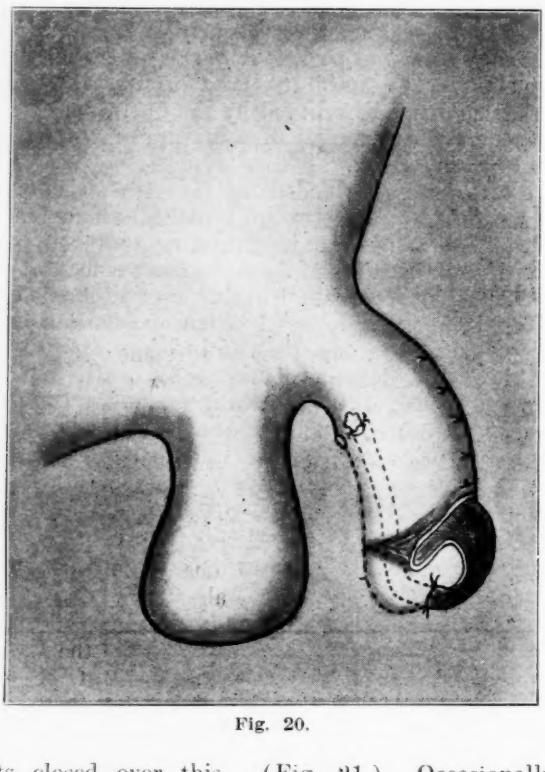

Fig. 20.

parts closed over this. (Fig. 21.) Occasionally a little urine escapes into the urethra and the entire canal is best drained by passing several silkworm strands of horsehair through the urethra and out alongside the catheter in the perineal opening. When union of the canals is complete the drains are removed and the perineal drainage will usually close itself in a few

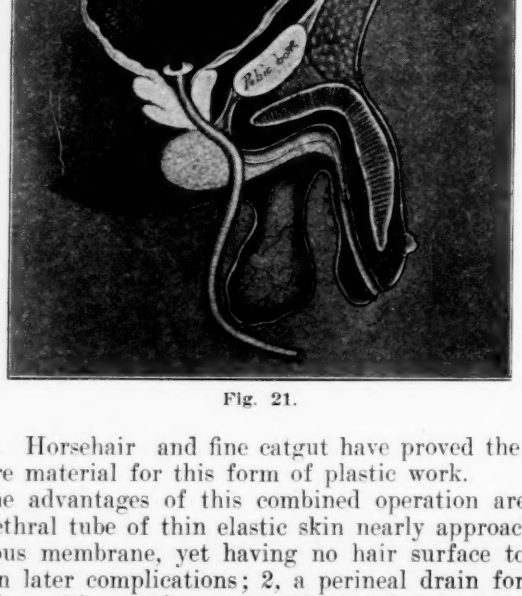

Fig. 21.

days. Horsehair and fine catgut have proved the best suture material for this form of plastic work.

The advantages of this combined operation are: 1, a urethral tube of thin elastic skin nearly approaching mucous membrane, yet having no hair surface to occasion later complications; 2, a perineal drain for the bladder, with a self-retaining Jacobs' female catheter; 3, a silkworm drain for the urethra; and 4, in being a method capable of application to the worst types of hypospadiac cases.

I report four cases of hypospadias cured by various methods:

CASE 1.—(St. Mary's Hospital Reports for 1897.) A boy of 4 years, penile type, was given two operations, the first a Duplay, with partial success; the second a Thiersch, with a good urethra.

CASE 2.—(St. Mary's Hospital Reports for 1898.) An adult, with the balanic type, was given two Thiersch operations, with a nearly perfect result.

CASE 3.—(St. Mary's Hospital Reports for 1900.) A boy 6 years of age, of the perineo-scrotal type with divided scrotum, at the first operation had two inches of urethra constructed from the prepuce and skin of the dorsum of the penis; at the second, bladder drainage, a Nélaton catheter in the perineum, but union at the juncture of the urethras failed. Urine passed by the catheter; bladder tenesmus. The third operation gave bladder drainage by means of Jacobs' self-retaining female catheter through the perineum, for eight days; silkworm strands in the urethra for drainage. Cure.

CASE 4.—(St. Mary's Hospital Reports for 1900.) A boy 8 years of age, the peno-scrotal type, was given two operations. The first was construction of 1¾ inches of urethra of prepuce and skin from the dorsum of the penis; the second, bladder drainage, self-retaining Jacobs' female catheter through the perineum and union of the two urethras. Urethral drainage was by silkworm gut strands. Cure.

THE POLLUTION OF STREAMS AND THE PURIFICATION OF PUBLIC WATER SUPPLIES.*

COMPARATIVE EFFICIENCY OF SLOW SAND AND MECHANICAL FILTERS.

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COMPOSITION OF RIVER WATER.

River water is a mixture of spring, ground, rain and surface water, but as the water-courses are the natural drainage channels of the country, it is not surprising that the wastes of human life and occupation should also find their way into the streams. It is for this reason that rivers, after passing through cultivated valleys with cities, towns, and villages or settlements on their banks, often contain a dangerous amount of mineral and organic matter. Rivers are always purer near their source; the amount of impurities increase as we descend the stream. Thus, for example, the Mississippi River at Minneapolis contains only 18.6 total solids per 100,000, while the same river at St. Louis contains 244.3 per 100,000.

RIVER POLLUTION.

The sanitarian recognizes two principal forms of pollution, viz.: The amount of mineral matter, and, second, the character and amount of organic matter contained in the water. The amount of mineral matter depends largely upon the geological formation of the country and the erosive powers of the streams, but water containing 50 parts per 100,000 or 30 grains of solid matter per gallon is unfit for drinking purposes on account of its irritating effects upon the gastro-intestinal tract. Beyond this, however, it is of no special significance, unless the water also contains metallic poisons or objectionable chemicals.

In regard to the Potomac River, which may serve as

* Presented to the Section on Hygiene and Sanitary Science, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

a type of American rivers for our discussion, we know, for instance, that certain pulp mills, tanneries and manufacturing establishments discharge chemicals and various refuse; one paper mill alone discharges over 100,000 gallons of liquid into the river each day heavily laden with sulphuric and tannic acids.

These gross forms of pollution, although at times so great as to prove destructive to game fish, are of less interest to sanitarians than pollution with organic matter, especially sewage contamination derived from the towns and settlements within the Potomac drainage basin, which covers 11,043 square miles, with an estimated population of 491,813 people, or about 44.5 per square mile.[1] Among the larger towns may be mentioned Cumberland, Frederick, Hagerstown, Harpers Ferry, Staunton, but as none of them are sewered, whatever contamination they produce is derived from surface drainage.

CHEMICAL ANALYSES.

Notwithstanding these numerous sources of pollution, the Potomac River, according to the chemical analyses, compares very favorably as regards purity with other American rivers.

The following are the results tabulated for comparison by Colonel Miller and based upon 72 analyses of the Potomac water as delivered from the faucet in the laboratory of the health office, from July, 1897, to Jan. 31, 1900, and daily analyses made by Mr. R. S. Weston, between July 1, 1899, and Jan. 20, 1900:

	Total Solids.	Free ammonia.	Alb. ammonia.	Nitrites.	Nitrates.	Chlorine.	Required oxygen.
Health office	126.7	0.0008	0.111	Trace.	0.639	3.78	2.56
Robert S. Weston	139 0	013	.105	0 002	.73	2.60	4 50
Mason's safe limit	150-300	.01-.12	.10-.28	.0135-.003	.42	3 10	5-7.

BACTERIOLOGICAL ANALYSES

Now, let us inquire into the results of the bacteriological examinations of this water which have been made by various competent authorities at the Army Medical Museum, and by Kinyoun and Sprague, of the Marine-Hospital laboratory, during the past ten years. The latter also examined samples at or near all the important towns from the head waters of the Potomac and Shenandoah rivers, and may be said to accurately represent the bacteriological condition of the entire river. Intestinal organisms were found in over 90 per cent. of the samples. The number of bacteria varied from 150 to 20,000 per cubic centimeter, with an average of something over 1000. The more recent examinations, conducted under the supervision of Colonel Miller from July, 1899, to March, 1900, show a minimum per cubic centimeter of 48 in July and a maximum of 51,000 for January, 1900, with an average of 3761 per cubic centimeter. Of the specimens taken on about two hundred different days, 50 per cent., or one-half, revealed the presence of the bacillus coli communis.

TURBIDITY AND BACTERIA.

This exhaustive study also confirmed the conclusions of Theobald Smith and others, that turbidity of the Potomac water is always accompanied by a larger amount of organic matter and germs, and that fecal bacteria and turbidity are coincident, simply because the same showers that bring along large sections of pulverized river banks also wash through the towns, barnyards, cesspools, and outhouses before finding their way into the creeks and river.

1. See Colonel Miller's report, Senate Doc. 259, p. 9.

SIGIFICANCE OF INTESTINAL BACTERIA.

The presence of intestinal bacteria is satisfactory evidence of pollution by fecal matter of man or animals and strongly point to the possibility of infection with typhoid bacilli.

Mr. Davis, of the Geological Survey, estimates that the sewage from the vicinity of Cumberland, a distance of about 134 miles, requires from two to four days to reach Washington aqueduct. We also know that typhoid bacilli retain their vitality for a number of days in ordinary water, and could therefore infect consumers of water in Washington.

TYPHOID FEVER AND WATER-BORNE DISEASES.

My suspicions that typhoid fever germs may thus travel all the way from Cumberland were confirmed as early as the winter of 1889-90, by studying the effects of the typhoid fever epidemic at Cumberland upon the prevalence of the disease in Washington.

The records of the health office show that during this epidemic, from December, 1889, to April, 1890, the deaths from typhoid fever amounted to 74, as compared with 42 for the corresponding months of the previous year. Indeed, we had almost double the number of typhoid deaths during these months than for any similar period either before or since this epidemic.

Cumberland had about 45 deaths and 485 cases. Wahsington had 74 deaths and about 740 cases, and yet the starting-point of all was the excreta of one patient washed into a little run which empties into the Potomac about 300 feet above the pumping station of the water-supply for Cumberland. In the face of this fact and the almost constant presence of intestinal bacteria, I have no hesitation in declaring that the excessive typhoid fever rate of the national capital is largely due to contaminated Potomac water. We know the germs must be there, whether the bacteriologists find them or not, because the people who drank the water were taken sick, while the non-consumers remained exempt.

What has been said of the Potomac River is equally applicable to the Ohio, Mississippi, Merrimac, Connecticut, Missouri and other American rivers, because they are the sewers and at the same time the source of water-supply for nearly all the cities located upon their banks, and these cities, as shown by the statistics collected by the Marine-Hospital Service, show, moreover, a marked prevalence of typhoid fever, thus confirming what has been observed over and over again that this disease, as also cholera, dysentery and diarrheal diseases, can be carried from one town or city to another by means of a water-course. About three years ago Surgeon-General Wyman estimated, from statistics received in his office, that every year there are no fewer than 45,000 deaths caused by typhoid fever alone throughout the United States. This number has now reached, very likely, 50,000, and, based upon an estimated mortality of 10 per cent., it is within reason to assume a yearly prevalence of 500,000 cases of this disease.

The average duration of a case is not less than thirty days. If we calculate that only $1 per day is expended for care, treatment and loss of work and that the value of a human life is $5000, we have a total loss in the United States every year of $400,000,000 from one of the so-called preventable diseases. Reduce the prevalence of this single disease one-half, which has been accomplished in Europe and can be done here, and the question as to what public sanitation has accomplished will be answered from an economic point of view.

We would not think of establishing a vicious circle

TABLE NO. 1.—DISPOSAL OF SEWAGE BY LAND TREATMENT.

Name of place, town or city.	Population.	When established.	Number of acres.	Remarks.
Far Rockaway, N. Y.	2,288	1895	. . .	Broad irrigation.
Hemlock Lake, N. Y..	1,000	1896	. . .	Pail system.
Vassar College, N. Y..	. . . .	1895	Several	Broad irrigation.
Atlantic City, N. J.	13,000 to 150,000	.	. . .	Filtration [not efficient]; no attempts to raise crops.
East Orange, N. J. . .	13,282	1888	. . .	Chemical treatment supplemented by filtration; no attempts to raise crops.
Essex Falls, N. J .	. . . .	1897	. .	Filtration.
Freehold, N. J	2,932	1893	16	Broad irrigation; 16 acres in Hungarian grass.
Lawrenceville School, N. J.	. . . .	1893	. . .	Broad irrigation; intermittent filtration
Morris Plains Asylum, N. J.	. . . .	1897	. . .	Sedimentation and subsurface irrigation.
Plainfield, N. J.. . .	13,000	1895	. . .	Broad and intermittent filtration [corn crops].
Princeton College, N. J	. . . .		4	Broad and intermitt't filtrati'n.
Summit, N. J.. . . .	3,502	1892	26	Broad and intermitt't filtrati'n.
Westfield, N. J.. . .	3,000	1897	12	Broad and intermittent filtration and broad irrigation.
Altoona, Pa.	30,337	1867	70	Irrigation; corn crops.
Norristown Insane Asylum, Pa.	1,500	1885	. . .	Broad irrigation; 5 crops of grass annually.
Wayne	997	1891	11	Broad irrigation; 5 crops of grass annually.
Weston State Insane Asylum.	. . . .	1891	27	Chemical percipitation supplied by broad irrigation.
Paris, Texas	8,254	1897	10	Intermittent filtration; alfalfa crops.
San Antonio, Texas .	36,673	1895	530	Irrigat'n; contemplate farmi'g.
Fostoria, Ohio	2,070	1895	. .	Land purification.
Oberlin, Ohio.	4,376	1893	15	Broad irrigation.
Pullman, Ill	11,000	1881	1,500	Sewage farm yields a net profit of $8.10 per acre.
Rochester Insane Asylum, Minn.	1,050	1890	. . .	Chemical percipitation, supplemented by intermit filtration.
Hastings, Neb	13,584	1892	20	Sewage farm.
Colorado Springs. . .	11,140	1889	35	Sewage farm; 15 acres in alfalfa, 10 acres vegetable.
Trinidad, Colo.	5,523	1892	. . .	Sewage farm; blue grass.
Helena, Mont.	13,134	1889	40	Sewage farm; vegetables and nursery stock.
Salt Lake City, Utah.	44,843	1896	183	Sewage farm; 80 acres in cultivation.
Phœnix, Ariz..	3,153		160	Sewage farm; garden truck.
Fresno, Cal.	10,818	1890	80	Sewage farm; garden truck.
Los Angles, Cal.. . .	50,395	1895	2,200	Sewage farm; grain, orchard, alfalfa, vegetable.
Pasadena, Cal. . . .	4,882	1893	300	Sewage farm; grain, orchard, alfalfa, vegetable.
Redding, Cal	1,821	1889	100	Sewage farm; corn, potatoes, vegetable.
San Luis Obispo, Cal.	2,995	1888	. . .	Broad irrigation.
Santa Rosa, Cal . . .	5,220	1889	18	Farm for vegetables.
Augusta, Me., State Insane Asylum.	. . .	1872	Few..	Produces hay and garden crops.
Concord, N. H., State Insane Asylum.	. . . .	1872	Few..	Pumped to the irrigated area for crops.
Amherst, Mass	4,512	1881	. . .	Settling banks and absorption ditches; 3 heavy crops of hay raised annually.
Brockton, Mass. . . .	27,294	1894	30	Crops of peas, beans, tomatoes, corn, cabbage, etc.
Gardner, Mass.. . . .	8,424	1891	2	Intermitt'nt filtrati'n; no farm.
Greenfield, Mass . . .	5,252	1882	. . .	Meadow irrigation.
Lenox, Mass	2,889	1876	1½	Subsurface and surface irrigation; no farm.
Marlboro, Mass. . . .	13,805	1893	37	11 acres used for farm purposes.
Concord Reformatory, Mass.	. . . . .	. . .	. . .	Irrigation; grass and corn crops
Medfield, Mass.. . . .	1,493	1886	1	Sedimentation and upward filtration.
Natick, Mass..	9,818	1896	12	Filtration.
Norfolk County Jail, Mass.	. . . . .	. . .	. . .	Land disposal plant; no details.
N. Brookfield, Mass .	8,747	1893	20	Broad irrigation; good crops.
Pegan Brook, Mass.. .	. . . . .	. .	4	Filtration.
Waltham School, Mass	. . . . .	. . .	. . .	Intermitt'nt subsurf. irrigati'n.
Sherborn Prison, Mass	. . . . .	. . .	. . .	Subsurface irrigation.
South Framington, Mass.	. . . . .	. . .	. . .	Indian corn, crops standing sold for $30 to $40 per acre.
Wellesley College, Mass.	500	1893	1.55	Intermittent filtration.
Westboro, Mass. . . .	5,195	1892	33	One-half of the land classed as swamp and meadow.
Worcester Insane Asylum.	. . . . .	. . .	30-40	About 14 acres used for farming purposes.
Central Falls, R. I . .	20,355	1892	35	Filtration.
Pawtucket, R. I . . .	32,577	1893	4	Filtration.
Cranston State Institute, R. I.	. . . .	1895	500	Irrigation.
Bristol, Conn..	7,382	1893	80	Broad irrigation and intermittent filtration; 6 acres in use.
Danbury, Conn.. . . .	16,552	1897	. . .	Intermittent filtration.
Lake Wauremaug, Conn.	. . . .	.	. . .	Dry-earth system and fluid waste by filtration.
Litchfield, Conn.. . .	3,304	1890	4	Irrigation.
Meriden, Conn	21,652	1891	150	Broad irrigati'n intermittent filtrat'n; no attempt at farmi'g.

TABLE NO. 2.—DISPOSAL OF SEWAGE BY CHEMICAL AND PATENTED PROCESSES.

Name of place, town or city.	Population.	When established.	Remarks.
Rockingham Co'nty poor farm, New Hampshire.	1,000	1895	Collecting tanks; sludge utilized for compost; patented process owned by the Glover Company.
Mystic Valley, Mass		1887	By chemical precipitation.
Worcester, Mass . .	98,678	1890	Chemical purification works.
Danbury, Conn . .	16,552	1897	Wolf's disinfecting process with sodium hypochlorite; recently purchased land for intermittent filtration.
Brewsters, N. Y. . .	. . . . .	1893	Electrical treatment, simply a process of disinfection by sodium chloride; hypochlorite produced by electrolysis.
Brooklyn, Twenty-sixth Ward, N. Y.	. . . . .	. . .	Chemical purification: J. J. Power's patent.
Chatauqua Assembly, N. Y.	(a)	1893	Chemical precipitation.
New Rochelle, N. Y.	8,217	1894	Chemical purification.
Bath Soldiers' and Sailors' Home, New York.	1,500	. . .	Chemical purification; Power's patent.
Batavia State Institution for the Blind, New York.	. . . . .	1891	Chemical purification.
Long Branch, N. J	7,000–8,000 80,000–100,000	1886	Chemical precipitation and mechanical separation.
Reading, Pa.. . . .	58,661	1895	Proprietary process.
Alliance, Ohio . . .	6,707	1899	Chemical purification.
Canton, Ohio. . .	26,189	1893	Chemical purification.
Wayne County Poor Farm.	. . . . .	1896	Chemical precipitation.

a Several Thousand.

TABLE 3.—SHOWING THE AVERAGE NUMBER OF DEATHS FROM TYPHOID FEVER PER ANNUM BEFORE AND AFTER FILTRATION

SAND FILTERS.

Name of town.	Average number of deaths from typhoid fever per annum before filtration.	Average number of deaths from typhoid fever after filtrat'n.	Reduction. Per cent.	Number of years upon which statistics are based before and after filtration.	Remarks.
Lawrence, Mass .	52	13.8	73.5	5	Filter established September, 1893.
Ashland, Wis.. . .	39	4.5	88.5	2	Filter established September, 1895.
Hamilton, N. Y.. .	0.66	0.33	50	3	Filter established in 1896.
Mount Vernon, N. Y.	3.4	1.8	47	5	Filter established in 1894.
	95.06	20.43	78.5	. . . .	

MECHANICAL FILTERS.

Macon, Ga	10.5	7	33	4	Filter established in 1893.
Atlanta Ga. . . .	61	46	25	3	Filter established in 1881.
Oakland, Cal. . .	19	17	11	5	Filter established (Hyatt) 1892.
Reading, Mass . .	4	1	75	1	Filter established (Warren), July, 1896.
Terre Haute, Ind.	21.6	15	31	5	Filter established (Natural filter), July, 1890.
Elmira, N. Y.. . .	10	11	Increase. 10	1	Filter established April, 1898.
Newcastle, Pa . .	13	28	115	1	Filter established (New York), April, 1897.
Lexington, Ky . .	18	64.2	256	4	Filter established June, 1895.
	157.1	189.2	Increase. 20.43%	. . . .	

between our mouths and the drainage of our houses and stables and yet practically we have suffered this to be done upon the erroneous assumption that rivers purify themselves. While a certain degree of purification is possible by natural means, such as dilution with unpolluted water, deposition of suspended matter, the agency of aquatic animals and plants, the bacteria of nitrifica-

tion, the destructive influence of sunlight upon micro-organisms, and the chemical affinity of certain bodies, I am glad that biologists have about come to the conclusion that "no river is long enough to purify itself."

What has been said of typhoid fever is equally true of other water-borne diseases like cholera, dysentery, cholera morbus, diarrheal diseases, and the transmission of the eggs of intestinal and other parasites, because the germs or eggs of these diseases are present in the intestinal tract and presumably also in sewage-contaminated water. Thus, for example, the cholera epidemic of Hamburg in August, 1892, resulting in 17,020 cases, with 8605 deaths, was caused by a band of gypsies camped on the banks of the river Elbe, and the discharges of one of its members suffering from cholera were emptied into the river, which at that time was served to the inhabitants of Hamburg without filtration. The epidemic spared the adjoining city of Altona, which derives its water from the same river after receiving the sewage of Hamburg with its 800,000 people, but Altona filtered its water and Hamburg did not.

PREVENTION OF RIVER POLLUTION.

When we remember that the general mortality of London a century ago was still 40 per 1000, while at the present time it is between 20 and 21 per 1000, and that no two factors have contributed so much to the prolongation of human life as the improvement of the air we breathe and the water we drink, it must be apparent that it is high time for civilized communities to take steps toward removing the danger to be found in rivers which are the sewers and at the same time the sources of public water-supplies. "One of the most pressing needs, therefore, is an investigation into the pollution of water supplies, which such pollution affects or threatens to affect the sanitary condition of the people of more than one State," because the individual states are powerless to protect themselves against the misdeeds of their neighbors.

Mr. Bartholett's bill for the appointment of a river pollution commission, first introduced five years ago, has not yet become a law. England enjoyed the benefit of such a commission as early as 1855, and in order to prevent, remedy and remove the danger of polluted water-supplies adopted a comprehensive system for the disposal of sewage and of water filtration, the fruits of which are shown by a marked decrease in the number of cases of typhoid fever, diarrheal diseases, and consumption, amounting in some localities to over 50 per cent.

I maintain that no community or individual has a right to pollute streams used for public water-supplies any more than a man has to contaminate his neighbor's well. This principle is very well appreciated by some of the nations in Europe. Thus the inhabitants of a town in Belgium suffered from the effects of a river polluted by the French, and the French government not only compelled the offending city to dispose of its sewage by irrigation, but granted a subsidy for this purpose.

All that is needed in this country is a correct appreciation of the dangers, and the first step in this direction is the appointment of a commission. The Marine-Hospital Service, which has for a number of years satisfactorily performed the functions of a national board of health, could, with the aid of the hydrographers of the U. S. Geological Survey and special agents of the Department of Agriculture, perform this duty without any great expense to the Government.

PURIFICATION OF SEWAGE BY IRRIGATION.

After determining the extent and dangers of river pollution, the remedy can be applied, and consists in the adoption of a system in which the sewage and noxious waste waters are utilized and disposed of by irrigation on so-called sewage farms, and the effluent and purified waters are returned to the streams.

This system has been in vogue in some European cities for many years. The city of Berlin purchased about 20,000 acres of land and, notwithstanding the enormous outlay of a little over $3,000,000 for the land and over $10,000,000 for the sewer system, operates these farms at a net profit of about $60,000 per annum. The city employs men condemned to the workhouse as laborers at the farms, and practically converts vagabonds into producing classes, with a fair prospect, too, that many of these individuals will continue their honest efforts to become self-supporting citizens; moreover, the old manor houses of the individual farms are utilized as country homes for convalescents, and thus the beneficent effects of this system are felt in more than one direction.

It is a matter of great satisfaction, therefore, that within the past ten or twelve years over one hundred communities in the United States have established plants for the disposal of sewage. The first attempt in the establishment of a sewage farm in this country was made at the Augusta, Me., State Insane Asylum in 1872, since which time 78 plants for the disposal by irrigation and 15 by chemical treatment, etc., have been established, and over 40 more projected. I have prepared Table No 1 from data obtained in Mr. George W. Rafter's Brochure No. 22 of the U. S. Geological Survey. 1899, on Water Supply and Irrigation. Among the more prominent and successful sewage farms may be mentioned Brockton and South Framingham, Mass.; Bristol, Conn.; Plainfield, N. J.; Altoona and Wayne, Pa.; Pullman, Ill.; Hastings, Neb.; Colorado Springs, Colo.; Salt Lake City, Utah; Helena, Mont.; Phœnix, Ariz.; Fresno, Los Angeles, Pasadena, Redding, and Santa Rosa, Cal.

Heretofore it has not been considered necessary to prevent the pollution of rivers affected by tide waters. Dr. Conn, of the Wesleyan University, in 1894, traced, however, an outbreak of typhoid fever to raw oysters which had been fattened in a place where they were liable to contamination by sewage from typhoid patients, and since then numerous instances have been reported elsewhere. It has been shown that typhoid fever germs remain viable in oysters from fourteen to thirty days, and the medical officer of the local government board of England, in the twenty-fourth annual report points out the danger of many of the oyster beds on the English coast from sewage pollution, all of which indicates that even this newly-discovered source of danger should be guarded against.

PURIFICATION OF PUBLIC WATER SUPPLIES.

The primary object of disposing of sewage by means of irrigation is the prevention of the so-called water-borne diseases. I do not believe, however, that this method alone can be relied upon, as instanced by the cholera epidemic at Hamburg and typhoid fever epidemics at Plymouth and Cumberland, where the dejecta of a single patient were sufficient to cause the mischief, hence prevention of river pollution should be supplemented by filtration of the water-supply on a large scale, of which there are two systems, the American or mechanical method, and the English or natural sand filtration.

Time will not permit me to enter into their respective merits except to say that the mechanical filters, as first pointed out by Mr. Hill, have accomplished very little in the reduction of typhoid-fever death-rates in cities where they are used. In the subjoined table five American cities using these mechanical devices are compared with five cities in Europe using water from sand filters, with an average for the year 1895 for the American cities of 46.8 typhoid deaths per 100,000 living, against 6 deaths per 100,000 for the foreign cities. That is to say, the American rate was almost eight times greater than the foreign rate.

EUROPE (SAND FILTRATION.)

	Before filtration.	After filtration.
Berlin	100	5
Breslau	113	9
Hamburg	21	9
Rotterdam		2
The Hague		5
Average	78	6

UNITED STATES (MECHANICAL FILTERS).

Davenport	26
Atlanta	43
Chattanooga	48
Quincy, Ill	58
Knoxville	59
Average	46.8

Lest this comparison between foreign and domestic cities be considered unfair, I have prepared Table No. 3, showing the average number of deaths from typhoid fever in several American cities before and after filtration. From this table we learn that while sand filters accomplished a reduction of 78.5 per cent. in the number of deaths from typhoid fever, the establishment and use of mechanical filters have coincided with an increase of 20.43 per cent.; and even if we eliminate from our consideration Elmira, Lexington and New Castle, where an increase was noted, the reduction of typhoid fever in consequence of mechanical filtration amounts to only 26 per cent., as compared with 78.5 per cent. by the process of sand filtration.

FLOATING KIDNEYS IN CHILDREN.*

I. A. ABT, M.D.

CHICAGO.

Floating kidneys in children have not been frequently observed. Dr. Jules Comby, at the sixth annual meeting of the British Medical Association, in 1898, reported 18 cases, the children varying in age from one month to 10 years and over. It is remarkable to note that 16 of his cases occurred in girls. This proportion corresponds to the observations which have been made in adults. Ebstein states that 100 females to 15 males are affected, whereas Dietl believes that 100 adult females to one male are affected. Senator writes that he considers the last proportion to be the more nearly correct. Comby's cases do not, however, stand alone in the literature; quite a number of observers before him have reported these cases.

Steiner[1] reported 1 case in a boy 9 years old, and also 2 cases in girls, respectively 6 and 10 years of age. In these 3 cases it was the right kidney which was involved.

Jacobi[2] believes that cases of floating kidneys in infancy and childhood are for the most part congenital in origin. In children of 10 or 12 years he thinks the condition may be due to a fall or a jump. He has observed at least 8 cases in the course of thirty-six years.

W. R. Stewart[3] reports the case of an infant of 8 months, who had swallowed some pieces of plaster, and who suffered afterward from intestinal obstruction. After thirty-six hours of ineffectual medical treatment an operation was performed. A distinctly movable tumor could be felt on the right side, which was believed to be the obstructed gut. Upon opening the abdomen it was found to be a floating kidney, while an intussusception in the left hypogastric region explained the intestinal obstruction. The child had never suffered any inconvenience from the kidney, and its discovery was purely accidental. Richard Frey[4] reports that in 500 autopsies he observed two cases of dislocated kidneys. In each case the kidney of the right side was the one involved. He found that the parenchymatous tissue, the vessels, and the ureters as well as the pelvis of the kidneys were normal. It is a fact well recognized that under normal conditions the kidneys have a certain mobility. In individuals with relaxed abdominal walls the lower pole may be frequently felt during deep inspiration. By floating kidney is meant an abnormal mobility of one or both kidneys, so that the entire organ can be palpated through the abdominal wall. (Senator.)[5]

The etiology of these cases in children, as in adults, is not altogether clear. In adults it is known that the influence of sex is a marked factor, the condition being much more common in women than in men, a fact to which reference has already been made. Not infrequently floating kidney is only one symptom of a general enteroptosis—described by Glenard. Traumatism undoubtedly acts as the direct exciting cause very often. Cases are recorded where blows, falls, the carrying of heavy weights, violent pressure and straining, whooping-cough and a variety of other causes of the same nature have been sufficient to loosen the kidney and cause an undue mobility.

Relaxation of the abdomen after pregnancies, abdominal tumors, ascites, rapid emaciation which leads to a partial or complete disappearance of fat within the renal fascia, may lead to the condition in adults. We must also consider that conditions which influence the weight of the kidney will be sufficient cause to eventually drag the kidney from its normal position and give rise to abnormal mobility. We have, for example, tumors of the kidney, and hydronephrosis.

The recent contributions of Wolkow and Delitzen,[6] on this subject, contain some interesting facts, obtained from experiments on the cadaver. The authors show that the kidneys are attached to the posterior wall in the paravertebral spaces (nischen). These spaces, under normal conditions, are of some depth, and are funnel-shaped below. In the cases where one or both kidneys had moved from their normal position, it was observed that these spaces were cylindrical, and the depth was less marked. The intra-abdominal pressure is an important factor in the fixation of the kidney. The authors also show that the anterior abdominal wall is an important factor in supporting these organs. They believe that the abdominal wall serves as a bandage, and the intestines as an elastic pad, both structures thus serving to support the kidneys.

In very young infants we are compelled to accept the congenital origin of floating kidney. In older children there can be doubt that a congenital predisposition for the disease existed. The hypothesis of Wolkow and Delitgen already cited may be invoked to explain this congenital tendency. The exciting cause may consist

* Read by title before the Section on Diseases of Children, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

1. Compendium of Diseases of Children, Prague, 1871.
2. Therapeutics of Infancy and Childhood.
3. Medical Record, Feb. 9, 1895.
4. Inaug. Diss., Zurich, 1886.
5. Ziemssen Specielle Pathologie der Therapie, vol. xix.
6. Abstract in Centralbl. f. Chir., 1898.

of an acute or chronic trauma. The latter is an expression of Kuester, which has reference to causes which are constantly acting, or at least which are of frequent occurrence, eventually dislodging the kidney from its fixed position. It is a noteworthy fact that in two of the cases which have come under my observation there was a high degree of pulmonary emphysema and chronic bronchitis.

SYMPTOMS.

Perhaps in the largest number of these cases in children, as is also true of adults, the symptoms are latent. Pain is sometimes noted where the mobility is of moderate degree. In some cases the patients suffer from paroxysmal pain, dependent probably on a twisting of the pedicle. The pain may be colicky in character. At times the attack is accompanied with chill, fever, vomiting and perspiration.

The urinary secretion may be diminished; a temporary or permanent hydronephrosis may result from twisting of the ureter. The kidney is usually sensitive, though not acutely painful if it is pressed. A patient of Gerhardt's who was himself a physician, compared the pain to that which is experienced when a testicle is pressed.

Symptoms on the part of the gastro-intestinal organs are not infrequently associated with floating kidney. Dyspepsia and constipation are very often present. Dilatation of the stomach is not uncommon. It is to be noted that of the five cases which have been observed and are reported in this paper three were in female and two in male children. In one case the kidney of the left side was the one affected.

CASE 1.—I. H., aged 7 years, a fairly well-developed female child, was an inmate of an orphan's home. The father had died as the result of an accidental injury. The mother suffers from pulmonary tuberculosis. The child had been previously well. Since her admission to the institution it is reported that she has been compelled frequently to desist from her play and was attacked with a feeling of distress on the right side of the abdomen. She was subject to attacks of bronchitis with elevation of temperature. She had distinct symptoms of adenoid growths in the nasopharynx, which were subsequently operated on. Physical examination of the abdomen showed a stomach of normal size. On the right side of the abdomen a tumor could be felt, which varied in position from one examination to the other; it could be readily grasped, was tender on deep pressure, perfectly smooth, and slipped readily from the finger's grasp. On one occasion the abdominal tumor caused the patient great pain of a colicky variety. An anesthetic was administered and the tumor found to have descended into the pelvis. It was carefully examined and replaced. The examination under the anesthetic showed a perfectly smooth kidney of apparently normal size, which had slipped down into the pelvis of the right side and, it was believed, had become twisted on its pedicle. The patient recently reported to me that if she runs or jumps the kidney descends into the pelvis of the right side, or sometimes it crosses over and is lodged in the pelvis of the opposite side. These distant excursions, she says, give rise to severe pain, and she secures relief by grasping the organ and pushing it up. The kidney is not permanently dislocated. If she has remained for a long time on her back it is difficult to feel the kidney while she is in the recumbent position. She has been greatly relieved by an abdominal supporter recently obtained for her.

CASE 2.—Tessie T., aged 12 years, has had measles, mumps and scarlet fever. Her thyroid is enlarged, and her mother says she has had pain in her right side for five years. She has complained for six months with symptoms of indigestion, the appetite is poor, and she has great distress after her meals; her abdomen becoming distended with gas, she has pain and frequently nausea. She observes, however, that the nausea is sometimes present before meals; it is not an uncommon thing for her to vomit before breakkfast.

Percussion over the area of the stomach and the distinct splashing sound over a large region shows that the lower margin of the stomach is three fingers' breadth below the umbiiicus. She frequently becomes jaundiced, but this remains only a few days; she also suffers from chronic constipation. Examination in the right hypochondriac region reveals the kidney, which makes deep excursions with inspiration, and no difficulty is experienced in grasping the organ between the fingers. The kidney is smooth and apparently not enlarged.

CASE 3.—Joe H., aged 10 years, well-developed, has been ill for a long time, complaining of cough, and some difficulty in breathing at night. His pulse is 90; temperature normal. Examination of the chest reveals hyperresonance over both lungs. Sonorous and sibilant râles may be heard over both lungs, and the respiration is diminished on both sides. The kidney of the right side can be felt one hand's breadth below the costal arch on deep inspiration.

CASE 4.—Chester S., aged 14, presented himself at the dispensary of the Northwestern University Medical School, and was examined by Dr. G. A. Gowen and myself. His family history is negative. The patient has had whooping-cough and measles. Two weeks ago he fell from a trapeze in the gymnasium. The fall did not prevent him from resuming exercise immediately afterward. He has suffered from cough for a long time, particularly at night, and at times he suffers from asthmatic attacks. Physical examination of the chest gives the usual evidence of emphysema and chronic bronchitis. On examining the abdomen the kidney on the left side can be plainly felt on deep inspiration. The size and shape, the tenderness on pressure, the consistence and the tendency to slip from between the fingers and ascend toward its normal position leave no doubt that the kidney is the organ involved.

CASE 5.—Ruth B., aged 9 years, has always been a delicate child. She was artificially fed in infancy, and during the first sixteen or eighteen months of her life suffered from indigestion. She is an extremely nervous child, is very fond of reading, and is inclined to overwork at school. She is very thin and is poorly developed. Her appetite is poor and capricious. She is subject to attacks of indigestion characterized by vomiting and elevation of temperature. On physical examination of the abdomen it is observed that the stomach is dilated. The right kidney may be readily grasped between the fingers on deep inspiration, if the child is examined in the recumbent position; if examined in the erect position the kidney is easily palpated and descends lower in the abdominal cavity.

ADVANCES IN OBSTETRICS DURING LAST HALF CENTURY.*

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The half century is just elapsing since, as a student, I attended my first case of labor, and as I have been engaged in the practice almost continuously to this time and conducted, to within a few years, as many parturitions as fall to the lot of most men, you would naturally suppose there could be no difficulty in selecting an original subject of interest for this paper, but in looking around for the advances of obstetrics in the multiplicity of experiences, I am surprised to find it not so easy, for while medicine and surgery have prodigiously advanced and therapeutics become almost revolutionized, obstetrics continues in the trend of a former half century, and beyond the introduction of necessity for asepsis, the use of anesthesia, and perhaps symphysiotomy in parturitions, gynecologists have captured in their new creations the scepter and left the practice

* Read by title before the Section on Obstetrics and Diseases of Women, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

proper quietly trudging on in the same lines as it was found fifty years ago.

As soon as gynecology, a surgical offshoot of obstetrics, made its appearance, obstetricians, fascinated by the brilliancy of abdominal surgery, soon tired of the tedious drudgery of obstetric practice and enthusiastically entered the development of the new field where professional reputations and fees astonishingly increased, with fewer hours for work, enabling them to enjoy fixed daily periods for relaxation and to secure at night the rest unknown to the general practitioner.

About medical centers this wholesale withdrawal was a comparative death-knell to the advance of obstetrics, genius took to this surgical offshoot and the consequence is that the proceedings of obstetrical and gynecological associations are almost wholly gynecological, so much so that a late president apologized for selecting an obstetrical subject as the theme of his address and which had no relation to the mechanism of labor or its physiological action, but to a pathological condition that was readily recognized and claimed by the gynecologist as within his province.

In my early days Hodge and Meigs, of Philadelphia, the then medical center of this country, maintained national reputations and were revered by all peoples as the highest exponents of the science and art of obstetrics, in the advance and development of which they had been principal factors. Their labors were only completed as the epoch of the greatest advance in obstetrics was ended by their deaths. Before that time the chair of obstetrics was the highest of the seven cardinal departments in the curriculum of study, made so by their personality, yet they drew the line on the use of the knife when necessary to complete labor and consigned the Cesarean section, the operation of that day, to the general surgeon.

This was the entering wedge for gynecology, though for some years dormant, until the genius of Marion Sims astonished the world in exposing preconceived fallacies by throwing aside the barriers that declared invasion of the peritoneal cavity high treason to humanity and regarded the sacred uterus a *noli me tangere*. Prior to this, spinal irritation was the fad, then irritable uterus, and, later still, displacements treated by metal pessaries that to-day might be mistaken for horseshoes. The nervous system was then appealed to to reveal the causes of all the ills that befel women, until the successes of Sims and his followers instituted a popular rage, by brilliant achievements in the development of the principles and practice of gynecology. For many years the lines were severely drawn and, as the gynecologist advanced those who remained obstetricians stood still. Ophthalmology, whose sessions in the AMERICAN MEDICAL ASSOCIATION had been the principal centers of attraction for scientists, as well *hoi polloi* of the membership, soon faded before the alluring wonders of gynecology, which became the absorbing topic and crowded its sessions to a full capacity.

In the minds of the general public, obstetrics is relegated to the position of a mere physiological function and the standing in many civilized countries of the obstetrician is far below that of the man of medicine or surgery. In the triumph of gynecology the average man soon learns to hate practical obstetrics and would avoid it, except for the pecuniary advantages and perhaps his necessities.

How often do you hear the question asked: Who are the distinguished obstetricians of our metropolis? You hesitate. On reflection you find few, and, when asked the names of men who occupy the chairs of obstetrics in various colleges, how many of you can name them? Men who hold them feel their comparative insignificance, as evidenced by their application or expressed willingness for promotion to the vacant chairs of gynecology; and it is a fact that most of them are in training for that step. But as the novelty and acquirement of large fortunes to the gynecologist are fast passing by, revulsion is sure to come when genius will return to the parent and obstetrics resume her place in the original curriculum of importance of fifty years ago, when to the minds of the public the accoucheur will no longer rank so nearly the status of the midwife. The young man who thinks he has accomplished nothing until he has successfully opened and closed a woman's abdomen will intuitively realize a higher sphere in the comprehensive revival when another Hodge or Meigs appears on the stage to lead the van of scientific investigation along its whole course. In our general medical associations, the gynecological sections will no longer occupy the whole time allotted to obstetrics and gynecology, for obstetrics must gather them into her fold by the force of advanced medical education.

As gynecology has robbed obstetrics of all the surgery, I shall confine this paper to the only two marked advances during late years, namely, asepsis, and particularly the use of anesthesia, therapeutically, in the conduct of labor.

The necessity of asepsis in midwifery is so apparent to the practitioner of the present day that cleanliness in all cases and the use of germicides to avert or combat suspected infectious or febrile conditions following labor make the practice imperative to the rational minds of most men. The variety of opinions pro and con expressed by many prominent men as to the value of the different agents and their use in detail, compels others to hesitate, because of their own universal success during long periods of obstetric practice where specific antisepsis was ignored and but the two precautions of cleanliness and avoidance of meddlesome midwifery observed, as taught from the beginning of time. In a healthy woman most of the natural vaginal secretions are germicidal, and in ordinary labors, unless the surroundings are unclean, all women should escape pathological infection, for when sepsis does occur some one is to blame. Infection comes from without, and septicemia is due in many instances to the infected hand of the obstetrician, largely by the use of lard, a fruitful purveyor of septic bacteria.

The profession does not so kindly take to the use of anesthesia, therapeutically, in conducting all labors, especially where by time and patience nature unaided can accomplish the delivery of the child. The causeless fear of post-partum hemorrhage, supposed arrest of uterine contractions, and danger to the life of mother and child, particularly where functional or organic disease of the heart, lungs or kidneys may exist, induces them to desist from its use, on false general principles, due entirely to a timidity begotten of voluntary inexperience.

Twenty-two years ago I had the honor of presenting a paper on this subject to the Pennsylvania State Medical Society, in which, after the administration of the English mixture of chloroform, ether and alcohol to 1000 cases, I felt justified in making the following conclusions, and have since repeatedly proved them to be correct:

1. The parturient state is the only condition of the

system during life in which anesthetics, judiciously administered, are entirely devoid of danger.

2. The physiological action of chloroform, ether and alcohol in a woman during labor is not identical with that in an ordinary subject in a dental chair or on the surgeon's table; and, from the history of such administration, free from a well-authenticated case of death, with statistics showing its superiority over venesection, opium, etc., in the desperate emergencies attending irregular labors, as eclampsia, it is fair to infer that this agent is an especial therapeutic indication for parturient women and should be so regarded in all labors where by its use the pains of the first and second stages could be obviated and this, too, to the ultimate benefit of the mother and safety of the child.

3. In puerperal eclampsia it is especially indicated, because of its direct, rapid and general action controlling nervous physiological irregularities, exciting secretion, relaxing the os and perineum, and, in short, preparing the parts so as to aid the accoucheur in his manipulations for the essential emptying of the uterus, to accomplish which venesection, opium, purgation, baths, counterirritation, etc., either singly or combined, bear to anesthetics the relation of mere fractions to a grand whole.

4. Its application is universal; no disease of heart or lungs should forbid its use.

5. In view of its known therapeutic action and safety in the small quantity required to produce narcosis, no use of the forceps, version or obstetric operation of any moment should be performed without it, not only to save the patient from shock and its consequence, but because of the great saving of time and labor, and in most instances the assistance it affords the operator.

6. Owing to the fact that uterine contractions are sometimes lessened by the administration, it may be regarded as important to precede it by an oxytocic in all labors and at any stage where the pains are slight, so as to increase their force, and also to guard against postpartum hemorrhage, a very infrequent occurrence where such precautions are taken.

7. Accidents to the unemptied bladder, ruptures of perineum and sphincter ani may be prevented, as well as death to the child in prolapsus of the cord, by the facilities afforded for rapid delivery in primiparæ.

8. In no instance have I seen narcosis of the child attributable to the anesthesia.

The small quantity necessary to produce semi-narcosis or full narcosis, the absence of nausea, exhaustion or shock on the return of consciousness, the impossibility of nervous perturbations, the freedom from hemorrhage, the invariably rapid getting up, with the small percentage of stillborn children, are facts that go very far to prove that which I believe to be axiomatic.

By judicious administration of an anesthetic, you can not possibly do harm to a woman in childbirth; nor can you fail to do her good.

In thousands of administrations only two cases of death are alleged to have occurred; even these two cases are so questionable that no one has ever been able to trace them to a reliable source. Whilst no one hesitates to administer the anesthetics in desperate emergencies, they fail to recognize the humanity of administration as a general practice, not alone to relieve pain, but for its imperative demand therapeutically, to facilitate by its aid a happy issue in result.

Few men who will sit by a case of labor using chloroform or the A. C. E. mixture in small quantities to produce scarce semi-narcosis during the pains of the first, and full narcosis in the second stages, can fail to recognize the human adaptability of these agents, not alone to relieve pain, but for the physiological effect in allaying emotional irritants or excitants, thereby moderating central and peripheral nervous irritability, exciting vaginal secretion, dilating the os uteri, relaxing the perineum, giving force and direction to uterine contractions and establishing in all the organs engaged in parturition their true physiological functional activity, so essential to the quick, safe and happy completion of even a natural labor. In exceptional cases, uterine contractions may be lessened, but ergot and the stimulating effect of traction by the forceps will restore the muscular tone and greatly add to the ease and safety of delivery.

But few cases of close observation will be necessary to impress you with the fact that the therapeutic physiological action is not that of any other condition in life, and in eclampsia the patient is safer in the vapor of the anesthetic, during the paroxysms, than when breathing pure atmospheric air.

Many years ago, I saw a primipara with general anasarca, and fearfully apprehensive, because of her condition and the fact that her mother died giving her birth. She was almost blind; the urine was albuminous and scanty. She was exhausted from loss of rest and exhibited the prodromes of convulsions. Without any evidence of labor, I directed an active purge and large doses of bromid of potassium, believing that when labor set in I would have a typical case for testing the virtues of anesthesia in this particular character of convulsive trouble. Before either of the remedies could be administered, convulsions occurred with great violence; I commenced at once the inhalation of the English mixture of ether, chloroform and alcohol at each exacerbation until she was lulled to quiet. Turning a deaf ear to all appeals of the friends for venesection, the anesthetic was steadily continued for two hours, when it was evident her labor had set in and the chief aim was to deliver as soon as possible. While bringing down the child with the forceps, the general appearance of the woman became so alarming as to unmistakably portend to the bystanders certain and immediate death, and, so unwilling were my medical assistants to continue the anesthetic that I was compelled to leave my portion of the work to take the charged towel and crowd it over the entire face of my eclamptic patient; she had apparently almost ceased to breathe, but soon the blueness faded from the finger nails, the extremities assumed a more natural color, the pulse increased in force and the respiration returned to its former stertor. This gave confidence, and the assistants, being assured of no responsibility in the event of a fatal termination, complied with my instructions and for another tedious hour we so guarded her from death as to complete her labor in safety of a healthy, living child.

Twenty years ago, I saw Mrs. D., age 37, with a history of healthy parentage, having herself enjoyed good health until her 29th year. At that time she had her third child, and the labor was followed by a severe attack of measles from which she never fully recovered. A slow and insidious catarrhal pneumonia kept her ill, though not confined to the house or totally disabled from performing her usual domestic duties. She was attended by several physicians for three years, without benefit. In 1878, she was placed in my charge. After three months' attendance, I observed her symptoms steadily increasing in degree. I could not interpret the character of the cough, dyspnea, loss of appetite, diar-

rhea, profuse and uncontrollable night-sweats, leucorrhea and loss of menses, with extreme emaciation, other than as direct indication of an early demise. I ordered a sedative mixture of hydrocyanic acid and morphia, and hopelessly retired from the case. After several months had passed I met her husband on the street and delicately enquired of her subsequent history. His answer was "As good as could be expected," and as he was with other men, I asked no further questions. Two months later, I received a nameless message to call at a house in another part of the town from where I had seen her last. There I found this same woman improved in weight, appearance and in many respects, though she still had cough, dyspnea, and the lungs showing serious physical signs of embarrassment from fibrous deposits. Her face and arms were thin, but the body was round and full, and while I was wondering what mysterious power had prolonged the life of that woman, my services were asked to attend her in an approaching confinement. While I confess apprehension, my faith in this greatest boon to parturient women was unshaken, and I welcomed the opportunity to prove the truth of my conclusion that no condition of heart and lungs should forbid the use of anesthesia in labor. Accepting service, I secured the assistance of Dr. Chrisman. Her labor came on gradually, but when the pains increased in severity her face and chest became cyanotic. I commenced the administration of the A. C. E. mixture and after very few inhalations the laryngismus stridulus entirely disappeared and there was no sign of return of the cyanosis to the end of her labor. But a small quantity was administered at the beginning of each pain; a state of semi-narcosis was maintained for three hours. When I felt she would have the assistance afforded by the forceps, Dr. Chrisman was summoned and the anesthetic consigned to his care. He was directed to produce profound narcosis; the forceps were applied for one hour, and the delivery was accomplished of a large, living, apparently healthy child. During the next three weeks all went comparatively well, but in the succeeding week a sudden change occurred; dyspnea, cough and fever increased; her old symptoms returned and she declined from exhaustive sweats and malnutrition during the beginning of the fifth week.

A postmortem examination revealed the right lung filled with fibrous deposits from top to bottom, with two cavities the size of walnuts, one in the middle and the other in lower lobe. The left lung was of the same character in the upper half, and so studded with deposits in the lower as to make her whole lung capacity but one-fifth. Five weeks before, the deposit may not have been so great; yet I think at a liberal estimate, we may safely say that at the time of her labor she was only using one-half of the left lung, for during the four weeks after labor, my books show that I paid her very few visits.

With this testimony we should have no hesitation to use the anesthetic in all painful labors. How few physicians would refuse an anesthetic to a man or woman who required the lancing of a whitlow, the extraction of a tooth, the amputation of a breast or limb, or any of the ordinary minor or major operations in surgery, where danger to some extent always attends, and in which exists but a small amount of pain, from the shortness of duration, in comparison with that of an average labor where statistics declare no danger under any administration can be apprehended from the anesthetic alone?

Where is the man who as physician or surgeon in his legitimate province could stand coldly by and see with indifference the writhing of a human being in broken or continued pain without offering to him an anodyne or anesthetic? Yet that same man exhibits stolid and heartless indifference when he becomes an accoucheur and has in his sole charge a helpless woman in the agonizing throes of labor, earnestly beseeching him to save her of her anguish or give to her immediate relief in death.

Fortunately in unnatural labors most physicians regard an anesthetic as directly indicated and rarely attempt version or craniotomy without it; but unless some desperate emergency exists, a morbid apprehension of some mythical possibility seems to seize the mind and govern their action, and a humaneness, for which as physicians and surgeons they may be proverbial, deserts them in the very hour when the tenderest sympathy and promptest care should demand the consummation of a possible painless and happy conduct by that boon which, to a parturient in the travail of labor, falls but little short of what may well be termed an especial therapeutic indication.

WHEN SHOULD PATIENTS BE ADVISED TO EAT EVERYTHING?*

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There can be no question that a large proportion of the chronic ailments from which mankind suffers are mainly direct or indirect consequences of wrong eating and drinking, the secondary effects being produced through autointoxication. However, other hygienic faults are frequently added factors in the causation. The ailments thus induced may include not only the well-recognized diseases of the alimentary system, but also an endless number and variety of more or less obscure conditions of impaired health, ranging from insufficiency of bowel movements or of renal excretion and affections of the skin, to organic disease of the heart, vessels and kidneys as well as apoplexy and many organic changes in the nervous system. They include especially a number of cases of neurasthenia and other vague derangements of the health in ways that often seem very mysterious until a proper interrogation of the digestive organs by the recent exact methods reveals the presence in them of some lesion or functional disturbance, such as a moderate dilatation, displacement or latent catarrh of the stomach or intestines, or, as more frequently happens, hyperchlorhydria with resulting intestinal dyspepsia. Such cases are seen every day by physicians who are accustomed to make thorough examinations of the abdomen and the stomach contents, and not infrequently the only prominent symptoms are nervous ones, especially insomnia and either mental depression or an unwonted nervous tension.

Many patients who place themselves under treatment for the consequences of an unhygienic diet, though their disease may have been years in developing, expect to be so fully cured in a few weeks or months that it will be possible for them to eat everything as they had formerly done. One of the popular tests of the skill of a physician is his ability to cure dyspepsia, as well as the other maladies which require a restriction of the diet, so completely that the patients can again "eat everything."

*Presented to the Section on Physiology and Dietetics, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

Before deciding as to the possibility of restoring to dyspeptics and other invalids this coveted power to indulge their palates to any desired extent without danger, it may be well to consider what the normal food requirements of man are, and then to contrast with these the sort of diet that is now in vogue among well-to-do people.

NORMAL FOOD REQUIREMENTS.

Physiologists have determined over and over again that to maintain the human body in full health, albuminoid or proteid material—furnished by meat, fish, eggs, etc.—must form approximately one-fifth part by weight of the food; the hydrocarbons or fats need to be in about the same or a slightly larger proportion; and the carbohydrates—starch and sugar—must form about three-fifths. The various authorities differ a little as to these exact proportions, and these must vary somewhat with the occupation, climate, etc., but all agree that the carbonaceous foods need to preponderate largely in the diet of man, or nutrition will suffer.[1] Lean meat contains chiefly proteid material, salts and water. Other meats contain considerable fatty matter, as do also such albuminoid foods as fish, eggs and cheese, but practically no starch or sugar, except cheese which contains 2 to 6 per cent. of sugar. In beans, peas and other legumens, as well as in the grains and unbolted flours, there is also a large percentage of proteid material combined with a still greater proportion of starch. Indeed, the legumens contain a greater percentage of albuminoid material even than most meats, fish or eggs, in addition to a still larger proportion of starch, and, therefore, are among the most nutritious of foods for persons able to digest them. The needed fat may be obtained from various sources, but especially from butter, cream, milk, olive-oil, the fat of meat, fish, etc. Milk is more nearly a complete food than any other single article of diet, yet does not contain enough of the carbohydrates to maintain perfect nutrition for prolonged periods in adults, without the ingestion of much larger quantities than the stomach could tolerate.

In the treatment of gastrointestinal catarrhs a milk diet, or one of meat mainly, is often prescribed with advantage for a short time, but either alone, if persevered with long, would cause a slow starvation.

Let us see, now, how a large number of the opulent classes, as well as many people in this country, of only moderate means, actually do eat and drink. With a great number of these, especially those who travel, or live much in hotels, breakfast includes a variety of hearty viands, of which meat or eggs or both usually constitute about one-half by weight, not counting coffee, which contains practically no nutriment at all, except the sugar and milk with which it is flavored. Luncheon also often consists of fully one-half albuminoid material, if not more. But the dinners are the most unhygienic. The approved modern dinner begins with oysters or clams, followed usually by a meat soup, fish and roast meat, and after these come frequently some sort of game and various kinds of entrees. All of these so far, except the vegetables served with the roast and fish, and sometimes with one or more of the other courses, belong to the proteid or nitrogenous aliments which, as a rule, should not exceed one-fifth to one-fourth, at the most, of the total food taken. So far, then, the table d'hôte dinner, eaten by the average guest at first-class hotels, consists mainly of albuminoid material, and even when there is added the bread often taken and the desserts with which the meal is topped off, the proportion of proteids is rarely brought down to as low an average as one-half. Moreover, at dinner the carbohydrates eaten are largely in the form of amylaceous articles which are taken mostly with the dessert at the end of the meal when, even in normal stomachs, there is too much HCl present to permit of further salivary digestion, and in hyperchlorhydrics often enough to impair also the action of the pancreatic juice. Then, the cane-sugar served generally with the starch in the dessert is the most fermentable of all foods, and therefore injurious to those patients and convalescents in whom there is a tendency to fermentation.

The pepper, hot sauces, and other sharp condiments with which such a meal is abundantly garnished, produce by over-stimulating the glands, in all except the worn-out stomachs, or those with depressed functions, an abnormally large flow of the gastric and other juices, so that the diner is tempted to eat, and often enabled to digest for a time, until his glands become prematurely exhausted, quantities of rich nourishment of various kinds, out of all proportion to his exercise and needs. The alcoholic beverages which form so common an accompaniment of the dinner, tend ultimately, even when taken very moderately, to produce degenerative processes, and if at all freely used, effect a serious amount of damage, exceeding even that brought about by the long-continued ingestion of a larger proportion of proteids than can be oxidized and assimilated. We know now, too, that alcohol, except in very minute quantities, retards instead of helps the digestive processes, and always impairs, when it affects it in any way, the motor function of the stomach.[2] Furthermore, the testimony of nearly all the leading physiologists is that it is in no proper sense a food.

Under the guidance, then, of our ignorant French cooks and caterers, who prepare their viands as though every one from childhood to old age had feeble peptic glands in constant need of the most energetic stimulation, and arrange their menus as though three-fifths or four-fifths, instead of one-fifth, of man's food should be nitrogenous, the gastronomic tastes and habits of the so-called good livers, and of large numbers of other persons, have become so perverted that it is not safe to advise even the apparently well to "eat everything" put before them. Still less is it safe to give such advice to those who for long periods of time have suffered much from impairment of their digestive functions or from toxemias produced by fermentation or decomposition of undigested food, even when they seem to be entirely recovered, since like causes would in time again produce the same effects and these would, in such persons, result even more certainly and speedily than before.

The truth is that, in all healthy persons with unspoiled stomachs, the gastric and other juices are secreted naturally in abundant quantity with only the stimulation resulting from the chewing and swallowing of any suitable, plain, nourishing food, and without the aid of either alcohol or pepper or other irritating condiments.

1. Landois and Stirling (Phila.: P. Blakiston's Son & Co., 1887) say there should be one part of proteid or nitrogenous to 3½ or 4½ parts of non-nitrogenous material in the entire food, while Rubner, in "Handbuch d. Ernaehrungstherapie" (Leipsig: Geo. Thieme, 1897), holds that the proportions must vary with the age and activity of the person, but for adults engaged in moderate or severe labor, gives the normal percentage of albumin as 16.7, of fat as 16.3, and of carbohydrates as 66.9 per cent. In the aged he would place these percentages at 17.4, 21.81 and 60.9 respectively—i. e., nitrogenous a trifle more (though still less than one-fifth), the fats considerably more, a trifle above one-fifth, and the starches and sugars jointly at just about three-fifths the total intake of food by weight.

2. Diseases of the Stomach. By John C. Hemmeter. Phila.: P. Blakiston's Son & Co., 1900.

The employment of these irritant drugs as excitants in the daily diet of children, youth and adult persons having normal stomachs, is a most irrational practice which is doubtless productive of an incalculable amount of harm. At the best it must lead to the taking of more food than is required, thus not only overtaxing the secretory organs, but also burdening the liver, intestines and kidneys with an unduly large amount of excretory work; and at the worst it must result in a relatively early exhaustion of both sets of glands, as well as in catarrhal inflammations of the alimentary canal and all the unnumbered maladies grouped under the terms lithemia or uricacidemia, not to mention the more dangerous affections of various organs which are believed to owe their origin often to an excess of uric acid and the xanthin bases, and the more obscure forms of autointoxication. It is not intended, however, to condemn the use of table salt, or the various mild articles employed merely to flavor our foods.

It should be time enough to spur the digestive functions with drug irritants when, in the absence of imprudent eating, they are found to be flagging in their work. Usually, when they fail to meet the demands made upon them, except after acute illness or in old age, it is because the demands have been outrageously heavy. In the majority of cases of dyspepsia there is, in the earlier stages at least, an excess rather than a deficiency of the hydrochloric acid, and generally of pepsin and rennet ferment as well, and in these cases the gastric irritants so recklessly employed by the cooks are as useless and injurious as are the scarcely more powerful stomachics which are still so often ignorantly prescribed for them by physicians.

There is more in dietetics than is dreamed of in many of our philosophies. The diet can be made quite as potent for good or harm as our most frequently used medicaments. Besides the abuse of nitrogenous foods and of the sharper condiments, much might be said, if time permitted, of the overloading of the stomach which constantly results from the bad custom of tempting the palate with a lot of rich and often indigestible sweets after the appetite has been fully satisfied and, considering the artificial stimulation just described, after the needs of the body have already been more than supplied. And I shall not enlarge upon the popular fallacies regarding the importance of fruit in the diet of man. Palatable, and often useful as many kinds of fruit are medicinally to counteract some of the effects of overeating, they do not supply to the system any indispensable elements not present in other articles of much higher food value and not so prone to disagree. In moderation most kinds of fully ripe fruit are safe enough for healthy persons, and for many of those whose chief complaint is constipation, but those of lithemic tendency need to indulge in them sparingly if at all.

CONCLUSIONS.

To sum up: We should never advise our patients to "eat everything" until we have thoroughly cured their diseased digestive organs and freed them from the lithemic condition; and powerful as are our modern weapons against these, we can not often succeed in accomplishing such a radical cure until the patients have reformed their unhygienic habits, not only in their eating and drinking, but also in both their work and play. They must learn self-denial and at least the rudiments of the immutable laws of health and, having learned, obey them. They must take into their stomachs, in approximately right proportions, the things that will nourish and strengthen them, and little or none of those whose chief effect is to derange or irritate the functions or tissues of the body. In many cases, besides, they must give up sedentary employments or pleasures and take regularly, every day, an adequate amount of exercise out of doors. In short, oxygenation must be made to bear its proper ratio to alimentation.

Nor should we advise even the well persons in the families under our charge to "eat everything," without some regard to their idiosyncrasies and tendencies, as well as a reasonable amount of care that they do not follow a harmful acquired taste for too much of the rich and complicated viands or such an undue proportion of nitrogenous food as would make patients of them a few years later, by setting up gradually insidious forms of chronic disease which would inevitably result, at a relatively early period of their lives, in gout or rheumatism, or in other more serious and fatal organic affections.

POISONING FROM AUTOINTOXICATION.*

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In Hufeland's "Art of Prolonging Life," written in 1790, and one of the few books of that century still published and read, there is a distinct recognition of autointoxication states generated in the intestinal canal by the fermentation and changes of foods and drinks. Several of the proprietary medicines owe their success to the recognition of this condition and the application of antiseptic and eliminative measures. One such remedy, widely advertised and supported by volumes of testimonials as having cured obscure disorders and averted serious diseases, contains sulphate of magnesia and soda concealed by some flavoring substances. The value of this remedy is in its power to overcome these autointoxicative states which are largely unknown. A book written by an unknown man, claiming to be the science of a new life, nothing more than a promulgation of the theory of two meals a day, points out the same range of causes, with abstinence as the remedy. Eating large quantities of food three times a day is very apt to produce intestinal troubles by supplying more nutriments than can be assimilated, and furnishing the conditions for poisoning from that which is not used. Every practitioner is familiar with autointoxication and infection from the presence of foods which undergo putrefactive changes. The good results from antiseptic and eliminative treatment demonstrate this. The limits of this present paper make it impossible to do more than call attention to a particular form of autointoxication due largely to the products and chemical disturbances which follow from the use of beer and spirits. The common theory that spirits increase or in some way aid digestion, and can be used with foods with comparative safety, has no support in modern research. Persons who drink wine and beer only at meals are never good types of health and free from digestive disorders so common to all classes. Moderate users of spirits only at meals are not common in this country, for the reason that they are unable to confine the use of spirits to the time of food-taking. Literally, such persons soon begin to drink at other times and occasions, and often to excess. The average moderate drinking man, whether using spirits at meals or on other occasions, very soon becomes an

*Presented to the Section on Physiology and Dietetics, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

invalid. Often this invalidism is called "rheumatism," "malaria," etc., and is marked by local palsy, headaches, irregularity of the heart's action, insomnia, dyspeptic symptoms, catarrhal difficulties, with alternate constipation and diarrhea. These and other obscure symptoms are ascribed to various causes and are rarely recognized as having any connection with the use of beer or spirits. The disappearance of all these symptoms after periods of total abstinence from spirits is usually ascribed to some other cause. The ordinary beer drinker is the most prominent example of autointoxication. In many instances but little change is noted in the first period of addiction. One may use beer daily for a long time, without any noticeable change, but sooner or later a class of symptoms will appear which clearly point out the presence of toxic products and their absorption into the system. The fatty degeneration so characteristic in beer-drinkers, associated with increase of flesh, loss of vigor and enfeebled action of the heart, is common to most cases. Enfeebled vigor and slow vitality is noticeable, particularly among the English workmen in large cities and towns. Such persons have every appearance of health, but when injured or attacked with disease, have no resisting power and die from apparently trivial causes. In this country beer-drinkers usually are dyspeptics, and have catarrhal and other local inflammations. They suffer from influenza, malaria, are sluggish, exhibit mental feebleness, and are great patrons of the doctors and the free dispensaries. The use of wines and stronger liquors in moderation or excess is followed by neuralgias, insomnia, and obscure pains which are called "rheumatism," and "malaria," or "the sequelæ of the grip." Other symptoms of disability which are noted in persons who use spirits to excess are frequently apparent in disorders of the nervous system. Some of the most obscure symptoms pointing to changes in the brain disappear rapidly from the discontinuance of spirits. In clinical studies this fact is so apparent that careful inquiries are always directed toward the habits of the patient to determine the influence of alcohol, if possible. The fact of using alcohol is becoming of greater significance clinically, and next to syphilis is a contributory cause in the production of a great variety of disease, and should be inquired into in every obscure case.

ACTION OF ALCOHOL.

Recent pathologic studies have cleared away much of the obscurity concerning the action of alcohol on the organism. We now know that alcohol, even in a small quantity, has a peculiar corroding action on both cell and tissue, impairing its power of growth and repair, and diminishing its functional activity. The nutrition which would naturally be used to repair cell and tissue is diverted, changed, and becomes waste products. The action of alcohol on the nerves, particularly those which control the blood-vessels, lessens the power of control and permit the blood to pass with greater force and volume, putting greater strain on the walls of the minute arteries, and is probably followed in many instances by minute hemorrhages. Alcohol in the blood diminishes the oxygen-carrying property, destroying the hemoglobin, and is followed by states of starvation. The waste products increase and the power of elimination decreases, hence all the processes of digestion are disturbed and altered. The waste products are retained and become sources for the growth of pathogenic germs. Both the liver and kidneys are subjected to increased activity with diminished nutrition. The pathologic condition is clearly that of starvation and irritation which rapidly merges into inflammation and exhaustion. The products of these deranged metamorphoses become real poisons, and their presence in the system is marked by many and obscure symptoms. Often the evidence of these pathologic conditions is confirmed by the results of treatment. An example will make this more clear. A moderate-drinking lawyer who was an invalid, having been unsuccessfully treated by many physicians for many grave diseases, suddenly became a convert to "Christian Science." He abandoned the use of all spirits, and lived on a restricted diet, with mineral waters. The recovery which followed was attributed entirely to mind effects. In reality, it was simply the removal of the causes, viz., the spirits, overeating, and the autointoxication which followed.

Again, a farmer, who used cider-brandy regularly every day, was thought to have gastro-enteritis, with colitis and local paralysis. Heart lesion and asthma were also present. After various efforts to recover, which were unsuccessful, he gave up all use of spirits, and was treated in a sanitarium, by baths, milk, and a restricted diet. The result was most satisfactory, and the recovery very rapid. These are common instances which are often seen in practice. The young physician trained in the technique of modern diagnosis would find very grave symptoms of organic disease in such cases. To the older physician with experience and an intuitive diagnostic sense, the term "bilious" would express his conception of diagnosis and subsequent treatment. A great variety of obscure symptoms whose origin would be doubtful, should always be treated on this supposition that the poisonous products may be spirits and allied causes. Inflammatory states and bacterial sources of infection, localized lesions, and irritations may all spring from the same source, and their sudden recovery following the use of commonplace remedies and placebos should be considered evidence of their toxic origin. Many of the most wonderful cures ascribed to various remedies are nothing more than the removal of toxic poisons. In neurotic persons these conditions are probably often present, and the value of a hospital treatment is very often due to a change of diet and removal of certain causes which were not recognized. The action of a cathartic in all inflammatory conditions is a practical measure along this same line. Neurasthenic states of the brain and nervous system, from overwork and neglect of normal living, may strongly predispose to the formation of toxins in the intestinal tract, the absorption of which will still farther complicate and add to the disorders present. Want of proper muscular exercise, confinement in bad surroundings, using food not adapted to the climate and work, are also prominent causes. Insomnia is another common condition following poisoning. In a patient under my care, where insomnia led up to morphia taking, the treatment by baths, mineral waters, and restricted diet resulted in complete recovery. The original cause was toxemia. The use of beer for its supposed food and strength value often increases this condition. The temporary relief which follows from its anesthetic action on the nerve-centers creates the impression of cure, while in reality the poisoning is increased. Spirit taking for the same reason is often followed by the same results. Sclerotic states of the brain and cord which follow the moderate or immoderate use of spirits, and the slight hemorrhages which we now realize to be very common, are all the direct results of the changes in the metabolism and the formation of poisoned products which in themselves become sources of injury. The term "bilious," in disrepute among

modern physicians, and indicating in a general way some unknown congested condition, has pointed out lines of treatment the results of which have been far more satisfactory and nearer a final cure than from any modern remedies. The hydropathic theory of disease and its treatment, particularly the internal use of water, is also much nearer the most advanced teachings of science and its practical application. I append some clinical illustrations of these facts which will bring them into greater prominence. I select some extreme cases as examples of the possibilities of relief from treatment based on this theory of autointoxications.

RESULTS OF TREATMENT.

A lawyer at 52 gave up business on the supposition that he had paresis and must die. A period of ten years of active treatment and consultation had confirmed the opinion that he was incurable. He continued to use spirits every day, at meals and at intervals, eating very heartily, and exercising very little. He suffered from palsy, lancinating pains, insomnia, and gastro-intestinal disturbance, was intensely irritable, and depressed at times, and had delusions of exaltation, which slowly increased. By an accident, he was forced to stay at a sanitarium, where he reluctantly consented to the withdrawal of spirits and the substitution of baths and moderate exercise. The change was so pronounced that the treatment was continued. Three months afterward all symptoms had subsided and he was able to go about free from pain and fully restored. He returned to his profession, working moderately and living abstemiously, using baths daily. Four years afterward he was still well and strong. The inference was clear that his paresis was very largely functional, and due to the toxic conditions of the body. This case was the subject of much discussion, and has been published in the journals.

An instance of a remarkable cure ascribed to a preparation of soda was undoubtedly due to hygienic measures of baths, abstinence from spirits, and a limited diet, followed continuously for months. I pointed out this probable fact to the disgust of the physician, who thought he had made a discovery of a new use of soda.

A second example of the same class was that of a prominent clergyman, who for years had used wines at table, and beer at intervals for its supposed tonic action. After an attack of influenza, hemiplegia with great enfeeblement came on. The urine showed disease of the kidneys and the stomach and intestinal tract were also deranged. Several very elaborate diagnoses of grave diseases were made by physicians, and equally elaborate plans for treatment were suggested. He was finally put under the care of a country doctor with no hope of recovery and the only expectation of making his last days comfortable. This physician used a cabinet bath for profuse sweating, and massage followed by a course of dieting, with mineral waters, and passive exercise. The recovery was rapid. The paralysis disappeared. His mental condition changed, and all symptoms of inflammation vanished. The restoration was complete. He did not resume his profession, but went into active outdoor service, and is now—three years afterward—well and vigorous. This case, like the other, was clearly one of poisoning which was rapidly merging into a chronic condition, but fortunately the removal of the active causes enabled Nature to restore much of the lost health and vigor.

An active, energetic lawyer, 55 years of age, had a convulsive attack, with unconsciousness, followed by hemiplegia and mental feebleness. This was considered cerebral hemorrhage. The physician gave spirits as a tonic and large quantities of liquid foods to keep up his strength. He had been a wine-drinker at the table, also a very hearty eater of meat, using large quantities of rich food, and occasionally using spirits. For two years he suffered from headaches and intestinal troubles and prolonged periods of prostration. Albumin was found in the urine, and his case was regarded as serious. I was called to witness his signature to a will, and to determine his mental condition. Acting on my advice, the family physician removed all spirits, and restricted the diet, giving mineral waters and baths daily. The result was very marked, with rapid recovery and complete change. After a tour to Europe, under the care of a physician, he returned in good health and vigor, and is now—six years after—strong and well. This was a clear case of autointoxication and the supposed hemorrhage was a poison attack from accumulation of toxins in the brain-centers.

A mechanic and mill-owner, without hereditary history, who had been temperate and regular in his habits up to 46 years of age, returned from a trip to Europe with the habit of using wine at meals. For the next five years he drank sweet wines freely at the table, using large quantities of rich foods on the supposition that he needed more strength and vigor with increased age and work. Attacks of rheumatism, with headache and extreme exhaustion, appeared and were treated by the physician without success. Inflammatory conditions of the joints followed, and convulsive attacks with great irritability and mental changes appeared. These were associated with depression of spirits and physical exhaustion. He went to a sanitarium; spirits were removed, the diet restricted and active eliminative treatment carried out for several months. Recovery followed. He resumed his business and two years later began to use wine at the table again, with rich foods. Strong spirits were taken at intervals, for strength. Later, rheumatism reappeared, then convulsive attacks which were pronounced epileptic. The physician continued to allow wine at meals, using narcotics to prevent the attacks, until finally death took place from acute pneumonia. In this case undoubtedly autointoxication from the use of wines and foods was the special exciting cause of the epilepsy and death. Had abstinence from spirits, rigid diet and careful eliminative treatment been persevered in, the result might have been different. The poisonous irritants and toxins concentrated in the brain-centers were the exciting cause of the explosions of nerve energies and the subsequent debility and death.

NECESSITY OF RECOGNITION OF ACTION OF SPIRITS.

I conclude at this point with a statement of the necessity of recognizing the poisonous action of spirits whether taken in moderation or excess, and summarize what I wish to make prominent as follows:

1. Alcohol in any form, taken into the body as a beverage, is not only a poison but produces other poisons, and associated with other substances may develop toxins. Alcohol is also an anesthetic and not a tonic or so-called stimulant. It increases the waste products of the body and diminishes the power of elimination. It also destroys the phagocytes of the blood, and thus removes and lessens the protective power of the blood-cells.

2. Whenever alcohol is used continuously as a beverage, for its medicinal effects, favorable conditions and soils for the cultivation and growth of poisoned compounds are created. These may be neutralized by other

conditions and not be apparent in the derangements of the functional activities which follow. Where disturbance and derangements of the nutrient and functional activities of the body are associated with the use of alcohol, their transient character and disappearance by the removal of spirits suggests the causes.

3. The functional and organic symptoms of derangement appearing in those who use spirits in moderation or excess, which quickly disappear by abstinence and eliminative measures, are clear indications of autointoxications from this source. Obscure symptoms of the nervous system in persons who use spirits should always be examined in relation to the toxic origin from this source. Also grave nutrient disturbances should suggest the same cause with the same treatment.

4. The treatment of all such cases, in which alcohol is used in any form, should be by antiseptic and eliminative measures, and the supposition should always include the possibility of poison by chemical products formed in the body.

PROPOSED NATIONAL BUREAU OF MATERIA MEDICA.

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At the Richmond meeting of the AMERICAN MEDICAL ASSOCIATION, in 1881, I read a paper before the Section on Materia Medica and Therapeutics, entitled "The Materia Medica of the Future." In this paper I called attention to a condition of affairs threatening progress in materia medica science and, in a resolution offered for me by Professor Dunster, of the University of Michigan, after the reading of the paper, I suggested a way out of some of the difficulties which I then foresaw. The correctness of my reasoning at that time has been amply proved by subsequent events.

From the Richmond meeting I went to Washington and proposed to Prof. Spencer F. Baird, the secretary of the Smithsonian Institution, the advisability of establishing a national laboratory of materia medica under the auspices of the Government. Conferences were held with the heads of various departments, including the medical departments of the army, navy, and marine-hospital service, army medical museum, national board of health, etc. Professor Baird finally said that he considered the plan one of the most important ever brought to the attention of the Government. But lack of appropriation caused its abandonment at the time. In papers read before the Ninth International Medical Congress, Philadelphia County Medical Society and the AMERICAN MEDICAL ASSOCIATION, I again and again advocated the plan. The AMERICAN MEDICAL ASSOCIATION memorialized Congress on the subject in 1891, and reprints of my paper[1] accompanied it.

What I contend is that the "Materia Medica of the Future" depends for progress upon the proper interpretation and application of the patent and trade-mark laws. If those laws are so applied as to leave materia medica products free to the science, so that they can be investigated by the co-operative work of the profession, and the knowledge thus evolved reduced to law and embodied in system without the interference of self-interested persons who seek to appropriate it for the purposes of exploitation by misleading advertisements, their application for the protection of capital invested in the drug business will be beneficial. If, on the contrary, these laws are so applied as to create monopolies in medical products, and encourage dishonesty in advertising, they will prove a hindrance to materia medica science and a curse to the American people.

Under act of Congress approved June 4, 1898, a commission was appointed to revise the statutes relating to patents and trade-marks. This commission reported Dec. 4, 1900, and the subject comes before the next Congress for debate. The time is therefore opportune, and it is important that the subject should be understood by the profession in all its bearings. Accordingly I beg attention to the following paper, which I have arranged in the form of a prospectus for a proposed bureau of materia medica. That the Government should inaugurate such a bureau all will doubtless agree. If the Government will not do so an association might be formed of the teachers of materia medica, and the work done by the experts connected with the medical and pharmaceutical schools and colleges working under the auspices of the association.

The plan I have suggested in the following paper is tentative, and needs most earnest consideration and discussion. When the right plan is reached, the committee on national legislation of the AMERICAN MEDICAL ASSOCIATION will be in a position to bring it before Congress.

PROSPECTUS.

The objects of this bureau are: 1, to establish the standards of the materia medica preparations on the market and keep them under analytic and pharmacodynamic observation, with the aid and co-operation of the expert chemists, physiologists, biologists, botanists, pharmacologists and clinicians connected with the medical schools and colleges, and the pharmacists and manufacturers of medicinal drugs and chemicals; 2, to act as the medium of communication between the scientific workers in the laboratories, hospitals and clinics engaged in the investigation of new materia medica products, and those engaged in manufacturing and marketing them, to develop the knowledge of their origin, genesis, nature, composition, methods of manufacture, standardization, pharmacodynamic properties and therapeutic uses; 3, to collect the knowledge of materia medica products, reduce it to law, embody it in system, and publish it for the benefit of science; 4, to aid the manufacturers of materia medica products and preparations who conform their goods to recognized standards in the introduction of their brands to commence by advocating that the medical profession in prescribing shall specify those brands which comply with scientific and professional requirements.

STANDARDS.

The necessity for authoritative standards to fix the nomenclature, define the character, establish the purity, and regulate the strength of medicine, is recognized by all civilized countries. These authoritative standards are called pharmacopeias. The "United States Pharmacopeia" is an authoritative list of medicinal substances with definitions, descriptions, or formulæ for their preparation. The work was devised, and is decennially revised by a committee appointed by a congress of physicians and pharmacists, which assembles in Washington every ten years for that purpose. The pharmacopeias of all nations, except those of the United States, Chili and Greece, are issued under the authority of the respective governments, and therefore partake of the nature of laws.

WANT OF UNIFORMITY IN MATERIA MEDICA PRODUCTS AND PREPARATIONS.

Compliance with the Pharmacopeia not being obligatory, there is a wide difference of uniformity in this country between the products of the various manufacturers. The processes of the Pharmacopeia yield products with characters which distinguish them from the products yielded by other processes. There are, for example, quite an extensive variety of processes extant for making fluid extracts. Taking the products of the Pharmacopeia as standard, and comparing the products of the other processes with them, grading them in accordance with their resemblance to the official fluid extracts, decided difference of character will be observed between the two extremes. The Pharmacopeia directs a certain process for the manufacture of tinctures. It is evident that the tinctures prepared by the official process, and those prepared by diluting the dif-

1. JOURNAL A. M. A., Oct. 24, 1891, p. 623.

ferent kinds of fluid extracts prepared by the processes of the different manufacturing houses, give an equal number of species of tinctures.

Another reason for want of uniformity in such preparations as the fluid extracts, tinctures, and other preparations of vegetable drugs, is due to the wide variance in the amounts of active principles present in different samples of the same drugs. To overcome this variation the Pharmacopeia directs that certain drugs, such as opium and cinchona, for instance, shall be assayed by official processes given for that purpose. Chemical assay, however, is confined to those drugs containing alkaloids, glucosides, and other definite principles, for which practicable processes of assay have been determined.

And what has just been said regarding galenic preparations applies also to chemicals, though, perhaps, not to the same degree. Each chemical process, however, gives a product with characters of its own; and, unless the product be rendered chemically pure, which is rarely the case, the variation in uniformity between products will be governed by the process employed in their preparation. Again, the commercial standards for purity in chemicals pertaining to the market is in many cases decidedly lower than that of the Pharmacopeia, this being another cause for want of uniformity in products.

WANT OF UNIFORMITY IN PRODUCTS MEANS WANT OF UNIFORMITY IN THERAPEUTIC EFFECTS.

The very first essential to uniformity in therapeutic effects is uniformity in products. The importance of all manufacturers conforming to the standards and processes of the Pharmacopeia is therefore apparent. The only exceptions to this rule permissable is in cases where pharmacopeial standards and processes can be improved upon. When such improvements are attempted, the manufacturers should furnish sufficient scientific reasons to justify departure from official standards. This means the employment of experts provided with laboratory facilities and instruments of precision.

THE QUESTION OF MONOPOLY OF MEDICAL PRODUCTS AND PREPARATIONS.

The beneficence and professional liberality which should distinguish the medical and pharmaceutical professions from the vocations of the merchant and tradesman, and the fact that the knowledge evolved by the co-operative work of professional men belongs by right to humanity, makes it unethical for those who are practicing the medical arts to individually appropriate the knowledge resulting from original investigation for selfish purposes. Pharmacy, or the art of manufacturing medicines, is a medical art, and the pharmacist and manufacturer are bound by the same ethical obligations as the physician. Therefore, those who violate the principles upon which medical practice in all its departments is founded, deliberately place themselves without the professional pale, and have no right to expect that the profession will accord them the privileges which belong only to those who comply with professional and scientific requirements. Among those privileges is the use of the scientific pages of the medical journals for the purpose of adding to the knowledge of materia medica by the publication of the results of original research. *But the price of science is publicity, and the surrender of all claims to proprietary rights in the products investigated.* Papers relating to patented or controlled products can only be regarded in the light of nostrum "write-ups" or testimonials, when favorable to the product, and regarded with suspicion when condemnatory; and no physician nor pharmacist of standing can afford to risk professional reputation by reporting upon them for publication.

THE QUESTION OF COPYRIGHTS AND PATENTS.

Carried to its logical conclusion, the enforcement of the professional ideal would exclude from fellowship the authors of medical books, who take advantage of the copyright law to secure monopolies of the products of their brains. Copyright has been made necessary, however, on account of the necessity of protecting the capital of publishers engaged in the business of printing and marketing books. But the monopoly obtained by copyright does not extend to the subject written about. It only includes the title of the book and its language. In the same manner exception can be made in favor of the inventors of new processes and apparatus for manufacturing medicine, and the Government can, without danger to science, grant them the right to prevent others copying their inventions for limited periods of time, so long as the patents do not cover the products themselves. If the product itself is monopolized, every effort is made by the manufacturer to push it to the front as a therapeutic agent by exaggerating its merits, and repressing its unfavorable side, so that it becomes next to impossible for physicians to ascertain its limits as a therapeutic agent and use it intelligently. And if any physician of standing has the temerity to publish its untoward effects, he excites the antagonism and reprisal of the manufacturer.

COMMERCIAL CLASSIFICATION OF MEDICINES.

According to the present classification in use at the United States Patent Office, "medicines" constitute a "class of goods," and manufacturers are permitted to register as trademarks on the class names which they are supposed to use for the purpose of distinguishing their goods of the class from other goods of the same class, but which they in fact use as the titles of the medicines themselves. As well might the patent office group in one class all metallic substances and permit the names of all new metals discovered to be registered as trademarks on the class of goods "metals."

Medical products may be distinguished and classified commercially by order, class, tribe, genera, species and variety. Take quinin sulphate, for example; it belongs to the order "alkaloid," class "cinchona alkaloid," tribe "quinin," genus "sulphate," species the product furnished by a stated "process," variety the "brand" of a stated manufacturer. Now it is evident that as each manufacturer has a right to use any unpatented process to make his brand of quinin sulphate, and that there are several such processes extant, and as the product of each process possesses characters of its own, it is important to name the process as well as the brand. There is a difference between process and brand, even in such definite substances as quinin sulphate. And this difference between process and brand is still more accentuated in case of fluid extracts and tinctures. By the use of the pharmacopeial process for making tinctures one species of tincture may be produced, and different varieties will result according to the amount of skill possessed and employed by the individual pharmacist or manufacturer in using that process. It follows, therefore, that the individual learning and skill which gives character to a medicinal product should have a name as well as the process. That name is the name of the manufacturer, or a name or mark standing in place of the name of the manufacturer—his mark, his commercial signature or trademark.

It is universally acknowledged in law that the function of a trademark is to distinguish the manufacturer, and it is perfectly apparent that the name of the order, of the class, tribe, genus or species of a medicinal preparation, is incapable of performing the function of a trademark. Not until that point is reached, where the individuality of the manufacturer counts, does the commercial signature, which distinguishes between one maker and another, come into play. It logically follows that the specifying of brands by physicians in prescribing throws the responsibility of character, purity and strength of medical products and preparations on the manufacturer where it belongs. This does not relieve the pharmacist who compounds the prescription from his responsibility in the matter of selecting between the various brands of fluid extracts, and other preparations on the market. The physician has the right to assume that the pharmacist fills the prescriptions entrusted to him with preparations made in accordance with the U. S. P. unless those made by other processes are specified.

THE QUESTION OF SPECIFYING IN PRESCRIBING, BY USING PROCESS NAMES AND BRAND NAMES.

Taking the above facts into consideration, it is evident that physicians in prescribing will consult their own interests, and the interests of their patients, by specifying processes and brands; and the manufacturers would consult their own interests by divulging their processes in many instances by patenting them, and providing their products with process names and brand names by which they may be specified. This particularly applies to new medicinal substances as prepared for the market before they have been standardized as to character by the committee for revising the Pharmacopeia.

Take, as an example, tannin albuminate. Knoll has invented a process for preparing it. The name "tannalbin" has been given to that species of tannin albuminate produced by the Knoll process. The Merck brand is on the market. Now it is evident that a patent granted Knoll for his process, which carries with it the right to prevent others from manufacturing and dealing in tannalbin for seventeen years, is protective alike to science and commerce, for no monopoly of tannin albuminate has been created, and exact knowledge of the Knoll process has been filed in the patent office in Washington, and may be had by any applicant for the small sum of five cents. It is also evident that the inventor, in making Merck his agent for introducing tannalbin to the American market, places himself in a similar position to that which the author of a copy-

righted book occupies in relation to the publisher, and that the physician in specifying "Tannalbin-Merck" secures the benefit of the Knoll process for manufacturing tannin albuminate and the guarantee of Merck for the character of the preparation. But if the patent on the Knoll process should have been extended to include tannin albuminate itself in the monopoly it would be a similar monopoly to that which the author of a medical book would obtain if his copyright could be made to cover the subject of the book as well as its title and language. It would be very similar to giving a botanist a right to prevent others from writing and publishing anything with regard to a new medicinal plant because he was the first to discover it and write about it. Manifestly, he would be able to control the knowledge of the plant during the existence of the copyright and exploit the plant as a "new remedy" by misleading advertisements "without let or hindrance." Knowledge must be protected, and science promoted, by leaving the products themselves open to the introduction to science by the co-operative and educational channels of the profession. Therefore, proper discrimination should be exercised by the physicians in prescribing to make sure they are not playing right into the hands of the nostrum trade.

THE INTRODUCTION OF NEW MEDICAL PRODUCTS TO SCIENCE.

The knowledge of materia medica, reduced to law and embodied in system, constitutes that important branch of medical science properly described as pharmacology. Pharmacology is defined as the science of medicines, their nature, preparation, administsration and effects; including pharmacy, pharmacognosis and pharmacodynamics. Knowledge of one medical product, not known as related to any other, or of many such products not known as having any mutual relations or as comprehended under the general law of pharmacologic science, does not reach the meaning of science. The knowledge of new remedies remains a heterogeneous medley of facts and fancies without co-ordination or control, until it is reduced to law, embodied in system, and provided with a proper nomenclature.

It is evident, therefore, that the only way by which new medical products can be introduced to science is by the co-operative work of those engaged in the practice of the pharmacologic arts, and through the educational channels of the profession—the professional societies and press, the laboratories and lecture-rooms of the professional schools and colleges, the text-books, pharmacopeias, and dispensatories.

THE INTRODUCTION OF NEW BRANDS TO COMMERCE.

There is a great deal of difference between the introduction of new products to science and new brands of manufacture to commerce. The former belongs to the sphere of science, and the latter to the sphere of commerce. The former can only be accomplished by the use of scientific methods; the latter requires commercial methods. The exploitation of new products by exaggerating their merits and repressing knowledge of failures is one of the most dangerous forms of quackery. The introduction of new brands to the medical and pharmaceutical professions, in the advertising pages of the medical and pharmaceutical press, shows business sagacity and enterprise. But it should always be remembered that: "Commercialism is not a word in good repute in connection with the practice of medicine (including pharmacy or the manufacturing of medicine for therapeutic use). Not that it is wrong for a physician (pharmacist or manufacturer) to make money if it is done honorably; nor is it beneath the dignity of an ethical member of the medical (or pharmaceutical) profession to apply honorable business principles in obtaining just remuneration for services rendered; but it is wrong, and degrading, for him to subordinate all he may do to commercialism. The making of money is the mainspring of commerce, but medicine (including pharmacy) in its scientific as well as altruistic ideals, has a higher and nobler aim. The laborer is worthy of his hire, but in medicine the latter is only an incidental, not the ideal, end and aim. If it were, our widely uttered claims of being a liberal profession are false, and a large proportion of what we may call the non-scientific portion of medical literature, including most addresses to graduating classes in medicine (and pharmacy) and to societies, is the veriest talking for effect."[2] Taking these facts into consideration, it becomes evident that the medical profession itself is the most to blame for the present unsatisfactory condition of materia medica knowledge, especially as related to new products, and that the only cure for "commercialism" in pharmacy, including that of the manufacturer and the corner drug store, is to discriminate against those who violate the professional ideal, and in favor of those who conform to professional and scientific requirements, by specifying the products of the latter exclusively.

2. Editorial, Jour. A. M. A., Feb. 2, 1901.

PLAN OF CO-OPERATIVE INVESTIGATION, STANDARDIZATION, ANALYTIC AND PHARMACODYNAMIC OBSERVATION.

Rules.

1. A manufacturer or dealer who desires to market a product under the auspices of the Bureau of Materia Medica shall make application in writing, stating the name of the product, the name of the process, the name of the brand, stating also what claims have been made for it as a therapeutic agent, and on what authority, and promising to abide by the following rules:

2. If the product is one for which a formula has not been published whereby it may be duplicated and become a matter of scientific record, the manufacturer shall provide the Bureau with such formula. The working formula of the manufacturer is not required, although for scientific and ethical reasons it should be published. But a formula must be given by which the product may be reproduced by any person skilled in the art, so that it may be placed on a basis similar to quinin, sodium carbonate, and other official chemicals, or to fluid extract of belladonna, tincture of opium, or other official galenicals, and thus be subject to proper classification and standardization, and fitted for intelligent therapeutic use.

3. The manufacturer shall furnish a sufficient quantity of the product for its scientific examination by the Bureau, which shall, with the manufacturer's aid, fix a standard for it upon which all future claims shall be based.

4. The Bureau shall then announce the fact that the article is under the auspices of the Bureau, and shall declare the standard adopted, and send this information to at least one medical and one pharmaceutical journal for publication.

5. If the article is a new remedy, or extrapharmacopeial preparation, the Bureau shall collect all available information concerning it, and shall send it, together with material for investigation furnished by the manufacturer without charge, to a selected number of medical institutions, hospitals and clinics for experiment to determine its nature, pharmacodynamic properties, and medical uses, and shall collect the results for classification and study. If the nature of the results are sufficiently promising to warrant the Bureau in retaining the product under its auspices, the name of the article shall be placed upon the list of the bureau. If the test shall prove unsatisfactory, the manufacturer shall be informed of the fact and the article dropped by the Bureau.

6. The Bureau shall, at irregular intervals, purchase on the open market, samples of the articles marketed under its auspices, and submit the same to scientific examination, to ascertain whether the standard agreed upon is being maintained.

8. If at any time the scientific examination shall prove the article to have fallen below the adopted standard, the manufacturer shall be notified and permitted to correct the error by informing the trade and replacing the stock of the article in the hands of dealers—the stock bearing the number of the batch from which the article was taken.

9. Should the manufacturer refuse to correct the error, the Bureau shall drop the article from the list and inform the trade that the article has been dropped, and that the batch examined is below standard.

10. Should willful adulteration, sophistication, or depreciation of quality be proved against the manufacturer, the name of the manufacturer shall be dropped from the list of affiliated manufacturers, and the profession and trade informed of it.

11. The claims made in advertisements for the article shall be frequently subjected to examination and, if erroneous statements are found therein, the manufacturer shall be notified; and, if such error be repeated, the article shall be dropped and the profession and trade so informed.

12. Any three affiliated manufacturers shall have the privilege of appealing to the Bureau in writing, requesting the scientific examination of any article on the list. If the article shall be found below standard, Rule 9 shall apply. The fee for this examination shall be paid by the challengers.

13. The manufacturer of an article being marketed under the auspices of the Bureau shall have the privilege of stating that fact on the labels of the article, and in advertisements relating thereto, but this shall in no way be construed as an endorsement of the claims to therapeutic value. It means only that the article conforms to the standard of strength, quality and character.

14. The Bureau shall classify extrapharmacopeial preparations generically and specifically, giving a name to each new genus and species when required. It is of course understood that the manufacturers are free to employ brand names in connection with the specific names to designate the varieties emanating from their respective laboratories; but the manu-

facturers should use care on their part not to force the medical public to use their brand names as the generic or specific names of the products. They should always provide their preparations with identifying names which may be employed in common by all manufacturers of the same article. Unless this precaution be observed, the manufacturers can blame no one but themselves if they are taken at their word, and their brand names are adopted as the generic or identifying names of the products themselves, become incorporated in the common language as material nouns, and thus sink into the public domain. The courts of Great Britain have, within about a year, made void the registration of "Formalin" and "Vaselin" as trade marks on the ground that the function of the trade mark is to point out the manufacturer, and the name of the goods, whether a coined name or not, is required as a noun of the language.

APPENDIX.

Under Act of Congress approved June 4, 1898, a commission was appointed to revise the statutes of the United States relating to patents and trademarks. The report of this commission is now before Congress, and is known as Senate document No. 20. It has been printed. By referring to page 31 of this report it will be observed that many foreign countries exclude from patent protection inventions relating to medicines. The report states that they are "excluded in Germany, France, Austria-Hungary, Italy, Japan, Denmark, Norway, Sweden, Portugal, Russia, and a number of other countries. Other classes of inventions excluded from protection in many countries are foods, chemical products, and inventions relating to war material." "The exclusion from protection of inventions relating to medicines or foods does not generally extend to those relating to processes or apparatus for their manufacture." "In all foreign countries which exclude chemical products from protection, except Switzerland, inventions relating to chemical processes may be patented, and in nearly all such countries it is expressly provided by law that a patent for a chemical process by which a new chemical product is made shall in effect cover such product, unless it is shown that such product was in fact made by some other process." (Read in this connection the second paragraph of this prospectus.) "It has been urged before us, both at the hearings of the commission, and in written communications laid before us, that the United States law should be amended to exclude from patent protection both medicines and chemical products generally, at least so far as such inventions are the inventions of subjects or citizens of the foreign countries which exclude these classses of invention from patent protection, and it has been contended that subjects or citizens of foreign countries should not be permitted to receive in this country patents for inventions which are not patentable in their own country."

On page 100 of the report appears a paragraph which shows that the claims made by some that the invention or coining of a word gives the inventor a natural right, or right at common law, to prevent others from using the word, are not supported by the law.

"Criminal prosecutions being had under the statutes of 1870 and 1876, in the southern district of New York and the southern district of Ohio, and a difference of opinion having been certified to the Supreme Court on the question whether these acts of Congress on the subject of trademarks were founded on any rightful authority in the Constitution of the United States, the cases came before the court for review at the October term of 1879. (Trademark Cases, 100 U. S., 82.) The court showed with admirable clearness that because of the distinction between patents and copyrights and trademarks, pointed out in the decision, the power of Congress to enact the law could not be derived from that paragraph of Article I, Section 8, of the Constitution which relates to authors and inventors, since the right of ownership in trademarks is created by *adoption* and not by authorship or invention."

On page 91 it is shown that "The adoption of a trademark or device to indicate the manufacture or origin of a certain article does not give any right to the exclusive production of the article so marked. Any article of manufacture, unless it be protected by a patent, may be made and sold by any person."

On page 107 appears the statement that "The representation of a star or the word 'star' has been registered in the United States Patent Office as a trademark for nearly every recognized class of goods, having been registered nearly 400 times."

On page 108 occurs the following: "It will, of course, be understood, that a star or an anchor or any other mark, may be used by manufacturers of or dealers in different classes of goods without conflict. For instance, the use of a star as a mark for tobacco does not conflict with the use of a star as a mark for matches or dress braid. Antipyrin, phenacetin, and the names of most all the other German synthetics have been registered as trademarks. If the claims of the manufacturers had been sustained by the courts then these names could have been held for all time as private property and the monopoly created by patents on products and process continued after the expiration of patents for an indefinite time. The decision of the United States Supreme Court in the Singer Sewing Machine case, in 1895, prevented such monopoly. This decision reads as follows:

The result, then, of the American, the English, and the French doctrine universally upheld is this, that where, during the life of a monopoly created by a patent, a name, whether it be arbitrary or be that of the inventor, has become, by his consent, either express or tacit, the identifying and generic name of the thing patented, this name passes to the public with the cessation of the monopoly which the patent created. Where another avails himself of this public dedication to make the machine and use the generic designation, he can do so in all forms, with the fullest liberty, by affixing such name to the machines, by referring to it in advertisements and by other means, subject, however, to the condition that the name must be so used as not to deprive others of their rights or to deceive the public, and therefore that the name must be accompanied with such indications that the thing manufactured is the work of the one making it, as will unmistakably inform the public of that fact.

The manufacturers of secret nostrums congratulated themselves that this decision did not apply to them. However, it is reasonable to suppose that it does include them, in the light of the above facts, and logical conclusions therefrom set forth in this prospectus, and in the light of the following decisions of the courts on the subject.

The name of a secret preparation may be used by anyone for goods actually prepared according to the recipe, for they are the goods indicated by the name, whether prepared by the original inventor of the recipe, or his successors in business, or not. Until the secret is discovered or betrayed the goods of the original inventor or his successors can be the only goods to which the name is applicable, or which are denoted by it; but when other people can make them, the difficult question of fact arises, whether the name is merely that of the goods themselves, or that of the goods of the kind prepared or sold by the original inventor or his successors in business. This was well put by Fry, J., in the Angostura Bitters Case (Siegert *vs.* Findlater, 7 C. D., p. 813), "I cannot say," the learned judge said, "that Meinhard may not, if he can, make a bitter identical with the plaintiffs', and if he hoes, I cannot prevent him from selling it as Angostura Bitters." It is to be observed that the person who produces a new article, and is the sole maker of it, has the greatest difficulty (if it is not an impossibility) in claiming the name of that article as his own, because until somebody else produces the same article, there is nothing to distinguish it from. No distinction can arise from using the name of the class, so long as the class consists of only one species, for then the name of the species and the name of the class will be the same. (The Law of Trade-marks, by D. M. Kerly, published by Sweet & Maxwell, 1894.)

There must be some word or sign, or device other than a generic name and words of descriptive quality. (Commissioner's decision, 1881, p. 97.)

So the words, "Night Blooming Cereus" were held to be invalid as a mark, being the proper descriptive appellation of the article. (Phalon *vs.* Wright, 5 Phila., 464.)

The same rule defeated the adoption of the words, Desiccated Codfish. (Harris, Beebe & Co.)

The policy that the mere use of a name to designate an article would give to those employing it the exclusive right to designate such article by such name, would be giving a copyright of the most odious kind, without reference to the utility of the application or the length of the title, and one that would be perpetual. Neither the Trade-mark Law, nor the Copyright Law, nor the Patent Law, affords any such right, or, under the pretense of the same, allows any one to throttle trade under the alleged sanction of law. (Browne on Trademarks.)

No one can claim protection for the exclusive use of a trade-mark or trade-name which would practically give him a monopoly in the sale of any goods other than those produced or made by himself. If he could, the public would be injured rather than protected, for competition would be destroyed. Nor can a generic name or a name merely descriptive of an article of trade, of its qualities, ingredients, or characteristics, be employed as a trade-mark, and the exclusive use of it be entitled to protection. (Canal Co. *vs.* Clark, 13 Wall, 323.)

We of course understand that when a name is coined by one who *uses it as a trade-mark* upon a particular article, if that name is originally a lawful trade-mark, its subsequent adoption by the public as a common appellative cannot take away the right already acquired. (Celluloid Co. *vs.* Cellonite Co., 32 Fed. Rep., 98.) But "When an article is made that was theretofore unknown, it must be christened with a name by which it can be recognized and dealt in, and the name thus given it becomes public property, and all who deal in the article have a right to designate it by the name by which alone it is recognizable." (Leclanche Battery Co. *vs.* Western Elec. Co., 23 Fed. Rep., 227.)

A word which is the name of an article, or indicates its quality, cannot be so appropriated. Every one has the right to manufacture the same article, and to call it by its name or descriptive character. (Phalon *vs.* Wright, Am. Tr. Cas., 308.)

It is only the seductive name that they claim as their exclusive property, and doubtless from the experience in its value in the extension of their sales. This, however, is a species of property which in my opinion is unknown to the law, and that can only be given to one by an infringement of the rights of all. . . . It has been repeatedly held that a trade-mark cannot be obtained in a name where it is the proper name for the article, as in the case of Schnapps, the subject of the controversy in Wolf *vs.* Goulard, or where it has by general use become the proper name of an article which all manufacturers may use, as in the case of Dr. Johnson's Yellow Ointment, Godfrey's Cordial, and Essence of Anchovies.

HOSPITAL CARS FOR RAILWAY SERVICE.*

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The end of the nineteenth century exhibits marked improvement in the means of alleviating suffering and for saving life. The sick and wounded in the last two wars have had furnished them life-saving appliances and means of transportation never dreamed of in former times. Public sentiment is so exercised in the matter of efficient attention to the needs of the sick and wounded in warfare that it is astonishing that people think or do so little in ordinary civil life in the matter of efficient first aid and comfortable transportation for the much larger number of persons who suffer injury on our railroads. The Interstate Commerce Commission shows that, in round numbers, there were 51,743 railroad casualties to persons in the year just ended. There were 7123 fatalities and 44,620 injuries. The total casualties to the British army in the war in South Africa, up to date, amount to about 48,000.

An interesting compilation of the number of persons killed and injured on the railroads of the United States during the year ending June 30, 1899, has been made by the Interstate Commerce Commission and furnished to the insurance press. During the twelve months 7123 persons were killed and 44,620 injured, a total of 51,743 casualties. In summarizing the accidents, it is found that 1 out of every 420 employees of railroads was killed, and 1 out of every 27 was injured. Of trainmen, engine drivers, firemen, conductors, etc., 1 out of every 155 was killed and 1 out of every 11 injured. One passenger for every 2,189,020 carried was killed and 1 injured out of every 151,998 carried. During the year 239 passengers were killed and 3442 were injured.

When one reflects that railroad casualties are continually going on, and will continue to occur, while those of warfare are intermittent and frequently far apart, as happily wars are not frequent in modern times, it is astonishing to know that scarcely any efficient system for assisting and caring for injured persons exists on many of the railroads in America. The purpose of this paper is briefly to consider the suggestion of furnishing properly-equipped hospital-cars on railroads for the purpose of caring for the injured and sick persons along their lines, and especially to incite discussion of this important subject from thoughtful, earnest, practical surgeons who are connected with railroads.

The experiment has been tried on a few lines. I know of the Long Island Railroad, the Lehigh and Susquehannah branch of the New Jersey Central Railroad, and and I am told that the Plant System also has such cars. The Missouri, Kansas and Texas Railroad has in preparation a car to be used for transporting sick and injured from an emergency hospital to their general hospital. There are probably others of which I know nothing.

I have been able to obtain very little data as to the efficiency and value of the few hospital-cars in use, so I shall have to discuss the subject purely theoretically in the light of the well-known necessities for surgical aid on railways.

1. *Expense.*—A very important matter when it comes to the adoption of the system on a railroad line will be the expense. For the car itself it may be estimated that $2500 or $3000 will be spent, the expense of its equipment will depend on how complete its appointments shall be made. If the system shall displace other methods of rendering first aid and be more efficient, there must be, besides beds and stretchers, a stock of aseptic dressings and antiseptic appliances, with simple splints, bandages, etc., which would doubtless amount to $300 to $500. At a low estimate, therefore, $3000 would be required to build and equip each car. Besides, the cost of running and transporting the cars over the line would be considerable in the course of a year.

2. *Range of Efficiency.*—Recently I asked an experienced dispatcher about this matter, and in answer to the question, "Under the ordinary conditions which prevail on a busy railroad line, how fast time could you guarantee a hospital-car in moving from one point to another?" He replied, "Twenty-five miles an hour would be about the limit." In other words, it would require about an hour to reach an injured man if he were twenty-five miles away from where the car was located. The reason for this is that the car would have to be sent "special," usually with a slow locomotive, and with chances of failing to get "right of way," or be attached to one of the lesser trains, which are usually slow. The fast express trains are too heavy usually, and their running time too close to add to their burdens; to attach a car to the limited or to side-track the limited for the car running "special" would not be thought of under ordinary conditions. As a means of rendering first aid, therefore, a hospital-car would be too slow to be efficient in a great many, perhaps the majority of instances.

3. *Location of the Car and the Number Required on a Line.*—As noted above, twenty-five miles an hour would, under ordinary conditions, be the expectation of hospital-car service. This might be in two directions, and so make the range of one car fifty miles. In order, therefore, to assure this service of one hour from the time of its call, there must be one car for every fifty miles of track. When there are a number of lines branching out from a common center, the proper location of the car would naturally be at the center or the point of convergence of the lines. One car under such conditions might serve for a much larger territory. Under the ordinary conditions of trunk lines, however, one car for every fifty miles would be necessary to give service with any degree of promptitude. For a main line of 500 to 800 miles ten to sixteen care would be necessary. Then there would be yards and branches to be cared for, and these would require, for a 500 or 800 miles' system, the addition of five or six cars—a total of fifteen to twenty-two hospital-cars. Yards, reshipping points, crossings, junctions and termini are generally regarded as especially liable to accidents. Wreck cars are, as a rule, not evenly distributed over a line. It would doubtless be well to follow this rule with hospital-cars. Perhaps with every wreck train a hospital-car might be located. I find that about ten wreck cars are allowed to a road of 500 miles of main line track. To follow this last suggestion would provide about the same number of hospital-cars as the first idea of distribution required. Putting them with the wreck cars would assure prompter service in case of serious catastrophes, perhaps; it would delay them, however, in many other instances. They would have to be uncoupled and detached from the wreck train when the hospital-car alone was required.

4. *What Provision Shall be Made for Surgical Service on Hospital-Cars?*—If the cars are to be properly efficient, a surgeon or surgeons must accompany them on all expeditions of mercy. To assure this, it would be

* Read at the Annual Meeting of the American Academy of Railway Surgeons, held at St. Paul, Minn., Sept. 5 and 6, 1900.

necessary to recast the ordinary arrangement of local surgeons along a railroad. It might be made a rule that the surgeon in whose territory the accident occurred should serve on the car. In the East, however, it is rare for one local surgeon to have charge of a territory of twenty-five miles of road. He might render first-aid and then turn the patient, or patients, over to the next local surgeon on reaching his territory, so that in a transportation of twenty-five miles two surgeons might have to officiate. It is rare on most roads to find, in every section of twenty-five miles, a hospital or place of permanent treatment to which the injured person could be carried. The journey of the car would have to be much longer in some instances. The first surgeon to render aid would have to go far afield, and perhaps leave his location for many hours, or else there would be a large number of changes of surgeons en route. This would, in the last instance, work no end of confusion. Suppose, however, the rule were made that the first local surgeon to render aid must accompany the patient to his destination. The time this would require would be a very serious matter to a surgeon, without any direct pecuniary return for his work and time. Grant, however, that the railroad company would pay for the surgeon's time and work. If it were at the usual rate of fees, very few railroads would stand it. If it were at contract rates, very few efficient medical men would stand it. This service would, to be efficient, require salaried surgeons, and the expense would be very heavy if the men employed were properly qualified. I believe no railroad would stand such expense.

Another arrangement might be made, and in some instances it would not prove inhumane not hurtful, viz.: a local surgeon might render first-aid, see the patient aboard the hospital-car, and put him in such position and condition as would seem proper at the time, and then entrust him on his further journey to a lay employee—a brakeman, flagman or conductor. Surely some one ought to remain in the car with the patient. If it be a lay employee, he must give up his other occupation during this time; this frequently required might also make a serious expense, and be in a great many instances inexpedient and dangerous.

Another point is: if the car has to leave its own territory, as it must do in order to prevent the evil of transshipment, and very serious discomfort to the injured person in many cases, what provision shall be made for caring for possible accidents during its absence? This might be a very serious matter. It would not do for the next car on the line to take its place, as this would only transfer the evil. It is therefore obvious that a hospital car must be supplemented by other provisions for caring for injured persons.

If the foregoing points are well taken, it is evident that in order to equip a railroad line which has a main line of as many as 500 miles with hospital cars in sufficient number to begin to do efficient service in the majority of emergencies, it would cost from $30,000 to $50,000, and the maintenance and running of these cars would also add materially to the annual expense account. The personnel and the usual arrangement with local surgeons would have to be materially changed. Lastly, and *especially,* prompt and rapid first-aid by means of hospital-cars, under the ordinary conditions, could not be rendered in a large number of individual emergencies. No doubt the sentimental value of a system of hospital-cars for emergency work would be very considerable, but as practical men can we advocate any such system when we know there are other and prompter means of succoring injured people, and which are on this account and perhaps in other respects more efficient?

The argument that a hospital-car furnishes seclusion, comparative comfort and facilities for proper dressings, and even operating-room facilities is frequently used. I am willing to grant the first point, namely, that the car furnishes seclusion and comparative comfort, without argument, *provided the car is at once* available. I have shown, however, that in many instances this will be utterly impracticable. The value of the other points of the argument are very doubtful. We all know it is much more important that the man who does the first dressing shall have the proper training and experience and know the best modern way of handling injuries than that all proper facilities for doing the dressings shall be provided to a less competent man. As I have said, in writing on the "Treatment of Compound and Complicated Fractures," the fate of the injured person depends very greatly on the man who does the first dressing. I doubt whether it is best for a seriously injured person to put him in the hands of an inexperienced and poorly trained asceptician with all the facilities for doing first-rate permanent work. I mean by this that the inexperienced man will thus be encouraged to attempt dressings which are intended to be the final restitution and rehabilitation of compound fractures, of very severe lacerations, or evulsions. Very rarely, except in minor cases, ought operations be attempted in hospital-cars.

It seems to me that the provisions and effort should be, in handling injured persons on the railroad, to furnish such simple aseptic dressings and apparatus as will prevent any further soiling or infection of the wounds, prevent or control hemorrhage, immobilize injured parts, and to transport the injured person where he may have careful and skilled permanent treatment just as soon as it can possibly be furnished him. Hospital-cars can not do all this. In this age of multiplicity of stationary hospitals along railroad lines, the publicity and some added discomfort in using the old manner of transporting injured persons are far less harmful than delays in delivering them at hospitals where they may find rest and permanent treatment at the hands of experienced men.

Is there then no field, no call, for hospital-cars on railroads? I think there is: 1. On a railroad composed of a number of short lines radiating from a common center, when the "center" has hospital facilities and the short lines have none, the car may be efficient for conveying relief in apparatus, a skilled surgeon and means of transportation. 2. Suburban short lines could also use a hospital-car efficiently. In both these instances one or two cars would suffice, and these roads could afford to employ a skilled surgeon to accompany the car. In both instances the object would be first-aid and the bringing of the patient to the hospital base, namely, the city in which the terminus might be. 3. Hospital-cars would be very efficient on railroads which have a system of small emergency hospitals along the lines, and one or two "base hospitals" at the termini. They would be used in transporting patients from the emergency hospital to the base or principal one. Dr. Yaney, chief surgeon of the Missouri, Kansas and Texas Railroad, informs me that his road has a hospital-car in preparation for this very purpose. 4. It may be considered utopian and very far ahead of the times, but an especial need for hospital-cars is for—intermittent—use on through express trains, to transport sick and injured passengers.

No doubt all of us can recall many instances of having seen and heard of cases of illness clearly contagious or infectious on crowded trains, in such conditions and locations that they must communicate the specific diseases. It is a matter of the commonest experience for persons suffering from pulmonary tuberculosis to travel long distances on railway coaches. Sleeping-cars are especially apt to be selected for these ailing persons. Efficient disinfection of coaches, especially sleeping-cars, is rarely practiced. It is astounding when one reflects on the subject that sanitarians have been so dilatory and slow to appreciate the great danger to the traveling public from the contaminations and infections of railway cars, and that no laws nor rules have been passed to meet this crying need of modern times. The various states have passed stringent laws requiring the careful embalming, disinfection and hermetic enclosure of all corpses of persons dying of contagious diseases, during their transportation on railroads. Individuals while still alive may travel without let or hindrance, suffering from any one of the contagious or infectious diseases on any railroad in the United States, and as a rule are placed in the very cars which are most sure to be frequented and most difficult to disinfect.

Understanding as we do the usual methods of transmission and the specific cause of pulmonary tuberculosis, it is amazing that no restriction has yet been placed on the transportation of persons who are in advanced stages of this disease. It would be a barbarous prohibition to prevent tubercular persons from using railroad cars in order to go whither their one chance of recovery might demand they should be. It seems to me the only proper, safe, comfortable and sanitary solution of this problem of contagious and infectious disease-spreading custom is for railroads to furnish properly-equipped hospital-cars which may be used to transport any doubtful case of disease to its destination, and so separate it entirely from the other travelers on the train. In order to make this system efficient, the co-operation of physicians generally must be obtained, and the various states should pass laws requiring the use of isolating or hospital-cars for sick persons. When such cars are known to be in use on a railroad line, a physician whose patient was about to make a journey for any reason would simply notify the proper railroad authority, and he would have the hospital-car prepared and attached to a given train. The patient and his attendants would have seclusion, more comfort, and efficient treatment might continue, without any danger to other people on the train.

These cars should be so constructed as to be inconspicuous on the outside, and have the simplest fittings inside commensurate with comfort and efficiency, and everything inside should be so arranged and constructed that thorough disinfection after, and proper sanitation during, the use of the car might be obtained. Two or three cars of this kind would be all that were necessary on a line of a thousand miles of main track. If they were properly stationed, they might also prove very efficient in cases of serious catastrophes along the line.

I wish it clearly understood that in recommending hospital-cars for express trains I do not advocate the abrogation of the usual ordinary laws of isolation which nearly every community has in vogue for the purpose of preventing the spread of contagious and infectious diseases, nor do I recommend common and frequent transportation of these cases, but as they so often travel surreptitiously, it would be far better to have proper provision for this transportation, and, under stress of circumstances or necessity, they might safely thus be carried. When, furthermore, it was known that proper provision was made for their comfort and care, the sanitary authorities might permit removals which would be of great benefit not only to the sufferer but to communities. The value of these cars for transporting tubercular persons, those having typhoid fever, and those having some forms of specific enteritis can not be questioned, both for the infected person and for the traveling public as well.

A RULE FOR COMBINING CROSSED CYLINDERS.

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One of the stumbling-blocks of the students of optics lies in the proper transposition of different combinations of spheres and cylinders. It always requires long practice at the test-case and no little figuring to become familiar with and able to make the proper combinations. Dr. James Thorington, of Philadelphia, in his excellent work on "Refraction," recently published, has greatly simplified these problems for the student by formulating set rules for transposing combinations of spheres, cylinders and of a sphere and a cylinder. In working out mathematical problems of this character in optics the easiest and quickest way to master them is by rule, depending upon experience to sink the rules in the background.

As a student, I could find no rules in the literature for the transposition of plus and minus cylinders with opposite axes into a sphero-cylinder, and worked out the following formula, which has been of great assistance to me and which was published this year in "Retinoscopy," by Dr. Thorington.

Formula.—To transpose crossed cylinders into a sphero-cylinder: "The cylinder is the sum of the two cylinders with the sign and axis of one of the cylinders. The sphere is the strength of the other cylinder with *its* sign."

Example:

$$-1 \text{ c. axis } 180^\circ \bigcirc + 2 \text{ c. axis } 90^\circ =$$
$$-1 \text{ s.} \bigcirc + 3 \text{ c. axis } 90^\circ, \text{ or}$$
$$+2 \text{ s.} \bigcirc - 3 \text{ c. axis } 180^\circ.$$

The use of the lighter and thinner lens is always to be aimed at and will usually give the best result; occasionally, however, the heavier lens will be more satisfactory, and rarely there are cases where only the crossed cylinders will be accepted.

It is in retinoscopy especially that the student will find rules of this character of great value, for there are always two meridians to be reduced to a sphere or a sphero-cylinder. The experienced refractionist will not need them.

Viavi Remedies.—These secret nostrums have undergone an airing in connection with a recent inquest in Liscard, England. The public analyst to the County of Chester reports that the liquid furnished him contained 30 per cent. of sugar, together with tincture of hydrastis and morphin. The pills were made of sugar, aloes and probably some colocynth. It appears that these preparations are as much exploited in Great Britain as they are in this country, it being the custom there as here to employ the wives of clergymen, and other socially respectable individuals to act as local agents for their sale. The *British Medical Journal* remarks that since it is shown that these preparations contain morphin, they come under the provision of the pharmaceutical act regulating the sale of poisons, and their agents and venders may find their business conducive to serious consequences to themselves.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

61 Market Street : : Chicago, Ill.

Cable Address: "Medic, Chicago"

Subscription price: Five dollars per annum in advance

SATURDAY, APRIL 27, 1901.

HYSTERICAL SENSORY APHASIA—WORD-DEAFNESS—IN A CHILD.

Although we do not as yet know the ultimate nature of hysteria, we have long since learned that it has nothing whatever to do with the uterus, after which it was named. An ample experience has taught that it may occur also in men, and it is fully appreciated that it may develop even in children—boys and girls alike. From existing knowledge and from analogy it may be safely inferred that hysteria is a nutritional neurosis, the aberrant function resulting from as yet undemonstrable changes in nerve-cells primarily susceptible in greater or lesser degree. These changes are probably due to processes engendered within the body and only indirectly by agents introduced from without. The inherent susceptibility of the nerve-cell would appear to be the primary essential factor, and it would be for this reason that hereditary influences are so important in an etiologic connection.

Whatever the mechanism of hysteria, it would seem that there is scarcely any disorder that it may not simulate, and at times so cleverly that even the expert may find difficulty in distinguishing the counterfeit from the genuine. It is not implied, and it is no longer believed, that hysteria is a simulated disease, although there can be no doubt that a tendency to exaggeration or deception is often a not inconspicuous feature. While the diagnosis, therefore, is at times difficult enough in adults, it may in children be practically impossible within the bounds of certainty. A case in point has recently been reported by Dr. Ludwig Mann.[1] The patient was a girl, 7 years old, in whom progressive indistinctness of speech and apparently complete loss of hearing had been noticed in the sequence of some emotional disturbance. More careful examination, however, disclosed that the child could hear, but failed merely to comprehend spoken words, although intelligence in general was present. In addition, there was a certain degree of paraphasia. The child could not write spontaneously nor from dictation, although she could copy printed and written matter. She was apparently unable to read intelligently. No lesion of the ears, and no other evidence of nervous disease was discoverable. Because of the absence of other symptoms of a lesion sufficiently extensive to account for those present, of the variability of some of the symptoms, of the mental attitude and condition of the patient, and of the development of the symptoms in the sequence of emotional disturbance, the conclusion was reached that the condition was one of hysteria. The treatment consisted in painful applications of the faradic brush to the lips and the face, but it was at first unattended with improvement. It was then decided to isolate the child, and in addition to painful electrization, cold packs and douches were employed and instruction in speech was given. Improvement now set in and, while at the beginning slow, it subsequently became more rapid and advanced.

The case is believed to be unique, for although cases of hysterical deafness have been reported, word-deafness or sensory aphasia of hysterical origin has hitherto been rarely, if at all, described. Charcot has reported a case of hysterical motor aphasia and suggested the possibility of hysterical word-deafness. Paraphasia also has rarely if ever been described as an hysterical manifestation. The diagnosis in this case has been questioned by Oppenheim,[2] who gives reasons for believing that an organic lesion may really have been present. He points out the possibility of a circumscribed lesion of the temporal lobe giving rise to the symptoms present and of the paraphasia being due to a natural want of development of the speech-functions in a child. The inconstancy of the symptoms he considers as favoring organic not less than functional disease, while the mental attitude of the patient may be looked upon as an individual peculiarity. Too much importance should not be attached to the results of treatment, inasmuch as they are just such as could be expected, as the developing child is particularly susceptible of re-education. We must confess, however, that we are not convinced by these arguments, although it must be admitted that the diagnosis is not easy. In the first place there is always something in the tout ensemble of a case that eludes delineation and can be appreciated only by those under whose immediate observation it comes and of course is lost in a merely didactic consideration. In the second place the absence of provocative etiologic factors, the mode of onset, the absence of paralytic or irritative phenomena, and of interference with consciousness render less likely the presence of organic disease. The case, thus, is of exceeding interest, even though it should prove not to be of hysterical origin.

Curschmann, in his monograph on typhoid fever, in Nothnagel's "System of Special Pathology and Treatment," refers, it is true, to the case of a girl, 10 years old, in whom, during convalescence from a severe and protracted attack of typhoid fever, ataxic aphasia suddenly developed, with preservation of consciousness and of all other functions, and especially without paralysis in the extremities. Speech began to return in the course of two weeks, and after the lapse of five weeks was completely restored. In a second case also ataxic aphasia

1. Berliner Klin. Woch., 1901, No. 5, p. 135.

2. Berliner Klin. Woch., 1901, No. 7, p. 203.

developed in the third week of a severe attack of typhoid fever, without loss of consciousness. Improvement set in after the lapse of a week and was almost complete in the course of a few weeks. In this case, however, there was, besides, some ataxia in the lower extremities, though with preservation of sensibility and of knee-jerks, but this also disappeared entirely in the course of ten weeks.

The fact is not to be overlooked that in both of these cases the complication arose in the course of an acute infectious disease attended often with profound changes in the blood.

THE ETIOLOGY OF TUMORS IN HYPERPLASTIC INFLAMMATIONS.

Careful review of the evidence before us of the parasitic origin of malignant tumors, by competent authorities such as Lubarsch, Councilman, Adami, and others, demonstrates that there is as yet but little real support for the parasitic theory. The recent work of Gaylord, noticed in THE JOURNAL, has not been officially published in full and so can not be considered at this time. Inoculation and cultural experiments and persistent study of the tissues of tumors for parasites have been faithfully carried out, the results being largely of a negative character. Had similar zeal and time been spent in a search for the cause of diseases that are more likely infectious, such as smallpox, syphilis and measles, it may be that more positive results might have been secured. Of course this effort to find a parasitic origin for malignant tumors has extended greatly our knowledge concerning many phases of tumor growth. The parasitic theory not having been satisfactorily demonstrated, Cohnheim's theory, at least as regards malignant tumors, being quite generally abandoned, and Ribbert's views no longer easily defended, investigators again are taking kindly to the old irritation theory of Virchow. In the case of carcinoma, Hauser and Hansemann assume a primary disease of the epithelium which expresses itself in an excessive multiplication of the epithelial cells. This disease may be the result of irritation, and by irritation is understood trauma in its broadest sense: the result of mechanical injury, the effect of bulky scars, continuous suppuration and inflammation, etc. The well-known instances of carcinoma developing in the smoker's lip, in the chimney sweep's scrotum, and in the biliary passages when affected with gall-stones, as well as numerous other similar examples, are recalled at once. Birch-Hirschfeld, in 123 cases of primary carcinoma of the gall-bladder, found calculi in 113; in 13 cases of secondary carcinoma there were calculi but twice. Cullen and others point out the significant relationship between carcinoma of the cervix and pregnancy—only a small percentage of the cases have not borne children.

From India we learn that the natives of Kashmir show a large number of cases of carcinoma of the thighs, probably the result of repeated burnings by portable stoves. Carcinoma frequently develops in pre-existing lesions often due to trauma or other factors such as leukoplakia linguæ, leukoplakia urethræ, psoriasis, fistulæ, syphilis, and tuberculosis. It seems that carcinoma not infrequently develops on the basis of a tuberculous lesion. In these instances it would seem as if the previous lesions favor the development of the primary disease of the epithelium that Hauser, on which Hansemann and others lay so much stress. It is a noticeable fact that the processes that precede carcinoma belong to the so-called hyperplastic inflammations and are characterized by cellular activity, especially in one direction, namely multiplication. Indeed, Le Count,[1] in his recent thorough study of the genesis of carcinoma of the Fallopian tube in hyperplastic salpingitis, points out that it is often impossible to draw a sharp line of distinction between purely inflammatory glandular hyperplasias and tumors. Le Count reviews the literature bearing upon this interesting and difficult problem in connection with growths developing upon various mucous membranes. He shows that great confusion has arisen in regard to tumors of the Fallopian tube, especially because of the failure to recognize that a diffuse hyperplastic inflammation may exist, which in many instances is quite distinct from tumor-growth. This confusion has in part been due to the fact that hyperplasia is so frequently combined with sacto-salpinx. Le Count cites several examples of growths in the tubes which were removed during the transition between hyperplasia and tumor. These considerations would seem to suggest that any factor that stimulates cell proliferation may lead indirectly to carcinoma, and that great care should always be used in interpreting hyperplastic conditions, especially of mucous membranes, as there are numerous forms of hyperplasia which do not merit the name carcinoma, although they may become the starting-point of carcinomatous proliferation.

SOME OF THE BLOOD-CHANGES ATTENDING TYPHOID FEVER.

The industry with which the study of the blood has been pursued in recent years is yielding rich fruit, and the results, while by no means complete, have already contributed much to the facility and the certainty of diagnosis. The field is, however, a large one and there is yet much virgin soil to be tilled. To confine ourselves to typhoid fever, it has been shown that, ordinarily, during the course of this disease, the number of corpuscles, both red and colorless, as well as the hemoglobin, is reduced in amount. In the presence of complications, however, such as perforation, peritonitis, suppuration and the like, the leukopenia is replaced by a leukocytosis, and this fact may prove of great diagnostic importance. Of the approved value of the Gruber-Widal agglutination-test nothing further need be said. There occur, however, certain changes in the blood that are probably responsible for a general hemorrhagic state

1. Johns Hopkins Hospital Bulletin, 1901, xii, 55-68.

or for the dissolution that results in the development of hemoglobinemia and hemoglobinuria. These manifestations are, it is true, uncommon and their exact mechanism is not definitely understood. When they occur they stamp the case as one of grave character. Their investigation is, therefore, all the more desirable and all the more to be encouraged.

Hemorrhage from the nose and from the bowel are well-known features of typhoid fever. Epistaxis is observed most commonly in the period of incubation or in the initial stage of the fever. It is due to hyperemia of the nasal mucous membrane or rupture of degenerated blood-vessels. It occurs in from 6 to 8 per cent. of cases. Hemorrhage from the bowel is one of the most important complications of typhoid fever, being observed in from 4 to 6 per cent. of cases. Occurring early—within the first two weeks—it is probably due to the hyperemic and spongy condition of the affected tissues of the intestinal wall. At a later period it must be attributed to erosion of vessels by ulcerative processes in the solitary follicles and Peyer's patches.

Apart from such conditions, hemorrhage may take place from all possible parts of the body as a manifestation of the hemorrhagic diathesis. This is a rare condition and it appears to occur only in grave cases, or it may be it is that which gives them this character. The bleeding is likely to take place first from the nose, then from the gums, into the skin and subcutaneous connective tissue, into the brain or the cerebral or spinal meninges or any of the serous sacs and from any of the mucous surfaces. With the hemorrhage there may be associated gangrene. This condition must, in the absence of more definite knowledge, be attributed to some as yet undiscovered change in the blood and the blood-vessels, of toxic or infectious origin. Whether it is dependent on the typhoid bacillus, and thus occurs as a complication, or on some other micro-organism and thus constitutes an intercurrent disorder, has not as yet been determined.

A fatal case of this character has recently been reported by Nicholls and Learmonth[1] and reference is made in this communication to four others reported by Nicholls. Two fatal cases have been reported also by Eshner,[2] and Hamburger[3] last year reported a case in which recovery ensued. In the case of Nicholls and Learmouth, which was studied with great care both clinically and pathologically, the extensive hemorrhage present was attributed in part to the fatty degeneration of the basement membrane of the capillaries and various endothelial cells, especially noticeable in the lungs and kidneys after death, but it could not be determined whether the escape of blood occurred by rhexis or by diapedesis. The degenerative changes were in turn ascribed to systemic intoxication, but, although mixed or secondary infection with staphylococcus albus was present, no micro-organism could be determined to be specifically responsible for the hemorrhagic condition and it is thought that all contributed a share.

Even less common than generalized hemorrhage are hemoglobinemia and hemoglobinuria in the course of typhoid fever. But a few instances of this kind have been recorded in the literature. The report of a case of this character was recently read before the Philadelphia County Medical Society, by Musser and Kelly.[4] This case is especially remarkable, apart from the rarity of the complication, on account of the recovery of the patient, and on account of the beneficial effects of the cold bath, which by some has been thought to favor the occurrence of hemorrhage and cold being generally recognized as one of the exciting causes of hemoglobinuria. The occurrence of the blood change is attributed to some idiosyncrasy, by reason of which the blood was peculiarly susceptible to the action of the typhoid bacillus or its products. A case of hemoglobinuria attended with recovery has been reported also by Osler.[5]

1. The Lancet, Feb. 2, 1901, p. 305; JOURNAL A. M. A., February 23, p. 530.
2. Am. Jour. of the Med. Sci., March, 1901.
3. Johns Hopkins Hosp. Reports, viii, p. 309.
4. Phila. Med. Jour., Jan. 19, 1901, p. 119; JOURNAL A. M. A., February 2, p. 346, ¶ 10.
5. Johns Hopkins Hospital Reports, v, p. 311.

THE PATHOLOGICAL UNITY OF TABES AND GENERAL PARALYSIS.

Some time ago this topic was discussed by the Pathological Society of London.[1] The chief points in favor of the pathological unity of the two diseases are well summarized by Mott, who holds that the poison of syphilis is the most important factor in causing two forms of progressive degeneration in the nervous system, one involving the exogenous afferent spinal neurons, namely, locomotor ataxia, and the other the association system of neurons of the cerebral hemispheres, namely, general paralysis. The two diseases are one and the same process affecting different parts of the central nervous system. It is now quite generally accepted that certain cases of locomotor ataxia present mental symptoms, that a certain number of cases of general paralysis present the symptoms and lesions of tabes, and cases of tabes may die of general paralysis. In both these diseases syphilis is regarded by many as the most important etiologic factor.

Mott has examined 12 cases of the tabetic form of general paralysis, and found in the brain the changes characteristic of general paralysis and in the cords the changes peculiar to tabes, namely, degeneration of the exogenous systems of fibers. He emphasizes as supporting the general trend of his argument that juvenile general paralysis and juvenile tabes probably occur only in congenital syphilitics. Krafft-Ebing's epigrammatic summary of the etiology of general paralysis, in the two words, "civilization" and "syphilization," with special emphasis on the latter, represents the general teaching of a number of prominent students of this perplexing

1. Transactions, 1900, li, 339-398.

malady, which many regard as a primary meningo-encephalitis, but which Mott holds is a primary degeneration of the neurons with secondary meningo-encephalitic changes, and for the following principal reasons: 1, its relations to tabes dorsalis; 2, the presence of Argyll-Robertson pupil in the majority of cases; 3, the existence of gray atrophy of the discs in a number of cases, and these last two symptoms are explainable only on the score of primary atrophy; 4, wasting of the whole nervous system out of proportion to the inflammation affecting some parts more than others, the wasting being undoubtedly primary and not secondary to bodily disease because it is more extensive than that seen in cachectic diseases, or even in starvation.

Many of the prominent London clinical neurologists took part in the general discussion, and on the whole the views expressed agree with those of Mott outlined in the foregoing. It was pointed out by Gowers and others that the selective action of the toxic substance at work in locomotor ataxia is well shown by the limitations of its action to the intraspinal continuations of the posterior spinal roots—a strong argument in favor of the lesion being primarily degenerative. All the speakers endorsed the view that syphilis is the preponderant factor in tabes, and this seems to have been generally accepted as true also of general paralysis. Indeed, Ferrier has come to the conclusion that if there were no syphilis there would be no general paralysis or tabes. Of course it is impossible to prove a statement like this, but certainly there is much in favor of this view. The question whether tabes and general paralysis are one and the same morbid process affecting different parts of the nervous system, although perhaps to a certain extent a question of words, receives an affirmative answer in so far as both are considered as the result of parasyphilitic lesions of similar pathogenesis. From the standpoint of prevention this is an exceedingly important doctrine, because all measures limiting the spread of syphilis will diminish the frequency of tabes and general paralysis.

PROPOSED BUREAU OF MATERIA MEDICA.

In another column appears an article by Dr. F. E. Stewart, on "A Proposed National Bureau of Materia Medica." The suggestions made are well worthy of consideration, and a careful perusal of the article is advised for those who are interested in the question of the relation of pharmacy to medicine. That there is a mutual interest in the two professions none will deny; that each is dependent on the other, is a self-evident proposition. There ought to be some way through which scientific pharmacy can be protected and rewarded. While some of the pharmaceutic preparations offered to the profession of this country may be classed as nostrums, and are unworthy of support in any way, the great majority are not only of therapeutic and scientific value, but those who produce them should be financially rewarded. There certainly ought to be some method by which the "wheat can be separated from the chaff," and while we are not prepared to say that Dr. Stewart's proposition will meet all the objections, still it does appear as though his solution of the problem is a satisfactory one, at least as far as is possible at the present time.

ERADICATION OF YELLOW FEVER IN HAVANA.

In his letter accompanying the report of the vital statistics of Havana for March, Major Gorgas, the chief sanitary officer, calls attention to the fact that Havana at last is free from yellow fever. He expresses the opinion that never before has that city been so long free from the disease, and attributes the present conditions in a large part to the systematic war waged on mosquitoes during the month of March. He has, he says, the strongest hopes of destroying the foci in that way. In former times and even since the American occupation the milder types of the disease passed largely unrecognized, and no such strenuous attempt was made to report them as is the case at present. Hence the significance of present conditions, and it is evident that the health authorities of Cuba are trying to verify clinically as well as experimentally the mosquito origin of the propagation of the disorder. This is only the beginning of the clinical test of the theory, but it is apparently a promising one. If they succeed in stamping out yellow fever, this result alone will be worth all the cost of the Spanish-American War. What can be done in Cuba can be done also elsewhere, and with this scourge of the American tropics, and malaria, eliminated, the area of the habitable globe will be appreciably increased for the white race, to say nothing of the removal of the danger to our southern coast from Cuban foci of the disease.

GENERAL SECONDARY INFECTION IN THE COURSE OF CHRONIC PULMONARY TUBERCULOSIS.

Chronic pulmonary tuberculosis in the majority of cases represents a mixed infection of the lungs. The exact rôle of the bacteria of secondary infection may not be fully and clearly established, but there is no question that the presence in the pulmonary foci of bacteria like the pneumococcus, streptococcus and staphylococcus is fraught with an element of additional danger to the tuberculous patient. In addition to hastening the local destructive process and causing more or less pneumonic infiltration as well as general intoxication, these secondary invaders may enter the general circulation and perhaps cause a terminal bacteriemia. Many investigators have examined the blood of the tuberculous for bacteria, especially during the period of hectic fever, and with varying results. One of the most extensive investigations of this kind is that by Teissier,[1] who studied bacteriologically the blood of fifty-three cases and obtained positive results in nine. His method appears to be quite reliable. He obtained streptococci and staphylococci. It is probable that in many cases the general infection does not lead to secondary localizations, but instances of endocarditis, of thrombosis, of metastatic suppuration are observed

1. Jour. de Phys. et Path. gén., 1901, III, 223-230.

in the course of pulmonary tuberculosis, showing that localizations may occur which are of decided prognostic significance. Hence in combating pulmonary tuberculosis the physician should not lose sight of the significance of secondary infection.

THE ST. PAUL MEETING.

The coming meeting of the AMERICAN MEDICAL ASSOCIATION at St. Paul promises to be largely attended and of especial interest. The steady growth of membership the past year, the progress in medical science, the new questions that have arisen, and the locality, affording as it does an opportunity to visit some of the most interesting sections of our country, all favor a specially large attendance. The members of the medical profession of St. Paul are zealous to demonstrate the capabilities of their city as a place of meeting, and everything promises that the occasion will be one of special interest and value. The scientific program, as shown by the preliminary announcements of the several Sections, is excellent. The date of the meeting is such as to harmonize with other attractions of a summer trip and, to those who have never visited it, the scenery of the upper Mississippi, which Anthony Trollope called the most beautiful river in America, will be a revelation. Among other side attractions are special arrangements for visiting the Yellowstone National Park, which will be opened one week earlier than usual on this account. Altogether there is every reason to look forward to the St. Paul meeting as one of the landmarks in the history of the ASSOCIATION.

DR. KINYOUN AND SAN FRANCISCO'S PLAGUE.

Some of the San Francisco papers are expressing a sort of malignant satisfaction over the prospects of a transfer of Dr. Kinyoun from that station to some other in the U. S. Marine-Hospital Service. They apparently look upon it as a sort of punishment to be inflicted on him for not acting in accordance with their wishes, and as a result of their efforts. Since Dr. Kinyoun's offense was that he simply told the truth and did not actively go to work to suppress it at their demand, it would be a disgrace to the service were this the motive of the order for the transfer, and we trust, therefore, that their assumption is a false one. As far as Dr. Kinyoun himself is concerned, it can hardly be altogether disagreeable to him to get away from those who have persistently and maliciously slandered him for simply doing his duty, and we trust the change, if it occurs, involves no serious inconvenience to him, and is not contrary to his wishes. The misfortune is that it gives to the newspapers which have opposed him, the opportunity to pretend, however falsely, that their influence has effected the removal, and it puts the head of the U. S. Marine-Hospital Service on his honor, as it were, to show the falsity of such misrepresentations. Dr. Kinyoun can hardly ask for a better vindication of his course before the medical public, than has been given by the facts in the report of the government commission (see last and this week's JOURNAL). If he is transferred it should be with the assurance to the public that his course, as regards the facts of the plague, is fully endorsed by his superiors. If public and professional confidence is to be given to the quarantine service, there must be no suppression of facts whatever may be the local wishes. Actual falsehoods seem to be demanded by a portion of the San Francisco press, and until the situation there is cleared up beyond any possible doubt, there is especial need of an honest and fearless representative of the Government at that post.

THE QUESTION OF ANTI-EXPECTORATION.

There is no physician—at least we confidently assume this to be the case—who will not endorse anti-spitting ordinances on general principles. If there is any way in which the tuberculosis germ can be universally disseminated it is through expectoration, and there are other sanitary objections, only a little less emphatic, against the practice, to say nothing of moral and esthetic ones. If the antituberculosis crusade does nothing more than put an end to the abominable practice of public expectoration in all sorts of places it will deserve the gratitude of mankind. But will it do it? The most sanguine optimism can hardly venture to predict this result with certainty. Spitting is considered an inherent right; a judicial decision, perhaps more than one, has settled this fact, and in most of the municipalities of the country the chances of this offense being duly punished are affected by the fact that the prosecution must run the gauntlet of expectorating police and spitting magistrates in a very large proportion of cases. Then we must consider the objection of the average tough to interference with what he considers his right to be a nuisance, with the consequent hesitancy of the usual meek-minded citizen to come into collision with him, and the difficulties of the enforcement of the law grow upon one's consciousness. A policeman was nearly murdered in St. Paul the other day in attempting to make an arrest for violation of an anti-expectoration ordinance, and other similar events are not unlikely. Nevertheless, the enactment of such regulation is a good thing. A law does not go at once into innocuous desuetude—to use the term introduced by and associated with a great public functionary—because it is not universally enforced. A partial or imperfect enforcement has still a certain moral effect, and what is more needed than anything else is its educative action on the public. What we want is a creation of a general sentiment that it is indecent and disreputable to spit in public places, and when that exists it will not be difficult to make the act unprofitable and to enforce regulations against it. Our civilization is too much behind that of most countries in this regard; a duly educated public opinion bringing the public spitter into proper contempt is what we need. It may be necessary to acquire this before anti-spitting regulations can be fully enforced, but the present agitation, if not allowed to die out, will help to bring this about. Let us have anti-spitting laws and enforce them as far as we can.

Another Xiphopagus.—Chapot-Prévost has found another pair of united twins which he is studying with interest. The twins are Chinese boys, 14 years of age, and are now on exhibition in a circus in Europe. The connecting band is comparatively long and narrow, thus allowing considerable freedom of movement.

Medical News.

CALIFORNIA.

Dr. Kate **P. Van Orden,** Ventura, has been appointed a member of the board of health.

Dr. John **J. Kinyoun,** Federal quarantine officer at San Francisco, who has made himself *persona non grata,* because of his refusal to conceal the existence of plague in San Francisco, has been transferred to St. Paul, Minn. He will be succeeded by Dr. Duncan A. Carmichael, now Federal quarantine officer at Honolulu, Hawaii.

Plague in San Francisco.—The Medical Society of the State of California, on April 17, passed a resolution expressing confidence that the San Francisco Board of Health, the State Board and the Government Commission will be able to watch and take proper measures for suppression of the plague in California.

ILLINOIS.

The **Semi-centennial in Medicine,** of Drs. S. S. Salisbury, Tolono, and Dr. Charles H. Mills, Champaign, was celebrated by a banquet tendered by the Champaign County Medical Society, April 9.

Smallpox in Springfield is taxing the patience of the health authorities. After securing a location for the isolation hospital, in a remote spot in Oak Ridge Cemetery, they were enjoined by persons who lived near the cemetery. They then set up the tents in Reservoir Park, but during the night of April 23 these were destroyed.

Rummage Sales and Smallpox.—Dr. James A. Egan, secretary of the State Board of Health, declares that a rummage sale held recently in one of the churches at Metropolis was responsible for the spread of "Cuban itch," that is, smallpox. He considers these sales great disseminators of disease, and that they constitute a most pernicious practice.

Chicago.

Dr. **Reuben Peterson** has been made Bates professor of gynecology and obstetrics in the University of Michigan, vice Dr. James N. Martin, resigned.

Dr. **William Osler,** Baltimore, will deliver the annual lecture before the Chicago Society of Internal Medicine, at the rooms of the Chicago Medical Society, May 15.

St. Luke's Hospital Bazaar, given last week by the graduating class of the St. Luke's Hospital Training School for Nurses, netted $1000 to the charity work of the hospital.

Chicago's Mortality.—Of the 551 deaths reported for the week ended April 20, 195 were due to diseases of the respiratory system, and 48 to violence. The death-rate for the week was 16.33 per 1000 per annum.

Nicholas Senn Hall.—A permit was issued April 17 for the erection of a seven-story addition to Rush Medical College, to be ready for occupancy November 15. It will cost $115,000 and will be devoted to clinical instruction.

Rush Students Transferred.—After July 1, the instruction in the first two years of the medical course of Rush Medical College will be given at the University of Chicago. President Harper announces in addition that large sums of money have been recently given to this department to buy new apparatus and to enlarge its capacity.

Smallpox.—There was a slight increase in the number of cases of smallpox discovered during the week, including a larger proportion of out-of-town cases. The second death from the disease occurred on Saturday—a typical case of confluent smallpox, in a patient "never vaccinated." Out of 193 cases since Nov. 30, 1900, there have been but two deaths. The isolation hospital report for the week is 17 new cases received, 13 discharged recovered, 1 death, 40 remaining.

Mortality and Morbidity.—After nearly three months of the lowest mortality rate on record, the scale has turned and the death-rate is rapidly rising to the usual spring proportions. A total of 551 deaths from all causes was recorded last week, an increase of 106 over the total of the previous week, and only 10 less than in the corresponding week of last year. This is an increase of nearly 24 per cent. over the average of the previous two months. In the weekly bulletin of the health department this result is attributed to the unusually low temperature of the month and the continuance of raw, chilling and depressing east and northeast winds laden with moisture from the lake. Chronic invalids and the aged, stricken with acute disease, are the principal sufferers from these conditions, and the death-rate among those over 60 years of age has increased more than 35 per cent. within the week, while pneumonia, heart disease and consumption all show an increased mortality. With a continuance of the prevailing weather conditions a further increase of the pulmonary diseases is inevitable. Individual precaution against undue exposure, attention to personal hygiene and thoroughly sprinkled streets, in the absence of rain, will restrict this increase in the degree in which these measures are enforced. Frequent showers, even at the expense of muddy streets, will do much for the public health at this season of the year, by limiting the spread of the air-borne and dust diseases.

INDIANA.

In Indiana, the State Board of Medical Registration and Examination has granted license to practice to forty-seven out of about seventy-five who applied.

The internes of the Indianapolis City Hospital, selected by competitive examination, have been assigned to duty; 5 to the dispensary and four to the hospital. Of these, 8 are graduates of the Medical College of Indiana and 1 of the Central College of Physicians and Surgeons.

Dr. R. B. Short, Union Mills, the Representative who had the Wood medical bill in charge in the house, says that the bill is causing large numbers of "Christian Scientists" throughout the state to retire. The laws of all the states surrounding Indiana are just as stringent against their practices as is the new law in Indiana. He has not observed that the law is operating to drive out of the state any other class of practitioners.

IOWA.

Dr. C. H. Cretzmeyer, Waverly, has been appointed to the house staff of the Iowa City Hospital.

Sioux City College of Medicine held its eleventh annual commencement April 24, and graduated a class of six. The trustees have decided to make the course of study eight instead of seven months, as heretofore.

Dr. John McClintock, of the Medical Department of the University of Iowa, will soon start for Europe to purchase new material for the pathologic and biologic laboratories which were recently destroyed by fire.

Iowa College of Physicians and Surgeons, the Medical Department of Drake University, Des Moines, held its annual commencement April 23, and graduated a class of fourteen. Hon. A. B. Cummins delivered the commencement address.

MARYLAND.

The Hospital for Consumptives has bought sixty acres more land, near Towson, in the suburbs of Baltimore.

Dr. John S. Fulton, secretary of the State Board of Health, has sent a circular to the truck farmers of the state calling their attention to the prevalence of smallpox and urging them to exercise care in employing hands and to see that those employed have been recently vaccinated.

Smallpox Threatens.—As the eastern shore counties are threatened with smallpox from Delaware, so the western part of the state is threatened from Pennsylvania. On April 15 there were thirty cases in Bedford County, Pennsylvania, within a small radius, near the Maryland border, and steps were being taken to establish a rigid quarantine by the Maryland authorities. The disease seems to have been carried to Pennsylvania from Cumberland, Md., by an infected individual, who escaped from that city before quarantine could be established.

Baltimore.

Dr. Melvin S. Rosenthal has returned after a year's stay in Europe.

Baltimore Medical College graduated a class of ninety-six on April 23.

Baltimore Medical College Alumni Association celebrated its twentieth anniversary on April 16. Dr. Edward L. Whitney was elected president.

Dr. John C. Hemmeter's new composition, "Des Sængers Himmelfahrt," for chorus and full orchestra, was produced by the Arion Society at Germania Maennerchor Hall, April 17.

Drs. Thomas H. Magness, Baltimore, and Dr. Joseph T. Devine, New York, have been elected resident and assistant resident physician respectively of Baltimore University Hospital.

The annual report of the Librarian of the Medical and Chirurgical Faculty of Maryland shows that 941 books were

added during the year. The journals regularly received number 156, chiefly English, German and French. There were 4123 readers and 1732 books were taken out. The Frick Fund books now number 1693.

Garrett Fellowship in Pathology.—Mr. William Johnston, the Liverpool ship owner, has founded an international fellowship of $500, in pathology and physiology, in memory of the late John W. Garrett, of Baltimore, president of the B. & O. R.R. It is open to members of American universities and medical schools. The incumbent must devote himself to research in the Thompson-Yates laboratories of University College, Liverpool. The professors of University College, in whose hands is the nomination, have asked the Johns Hopkins Faculty to send the first fellowship from Baltimore.

MICHIGAN.

Dr. Herbert M. King, Grand Rapids, has been delegated to represent the State Board of Health at the tuberculosis congress in London this summer.

Dr. William B. Watts, Jackson, has been appointed grand medical examiner and adviser of the Brotherhood of Locomotive Firemen, with headquarters at Peoria, Ill.

Dr. T. J. Haines, Three Rivers, who sued the Lake Shore and Michigan Southern Railway for injuries received in a railway accident, in 1899, has been awarded $3000.

The plague in Ann Arbor has no new victims thus far. The student is rapidly recovering from the infection and his two physicians are convalescing from the effects of the Haffkine serum injections.

The house has passed the bill providing for women physicians in Kalamazoo, Pontiac, Traverse City and Newberry asylums, in the home of the feeble-minded, Lapeer, the industrial school at Adrian, the school for the deaf at Flint and the school for the blind at Lansing.

MINNESOTA.

Dr. Thomas S. Roberts, Minneapolis, has been elected to the chair of pediatrics in the medical department of the State University.

The State Board of Medical Examiners recently granted licenses to practice to eighty-nine out of ninety-eight applicants who appeared for examination.

The vaccination order, which has been in force in Duluth since October last, and prevented unvaccinated children from attending school, was revoked April 6.

NEW YORK.

Dr. F. W. Robertson, formerly of Bellevue Hospital, and for the last few months resident physician and acting superintendent of the Elmira Reformatory, has been appointed permanent general superintendent of that institution.

Personals.—The governor has sent in the nomination of Norman S. Dyke, of Kings, as trustee of the State Consumption Hospital in the place of Walter Jennings, resigned, and has also nominated, for New York Quarantine Commissioners: Hugh McRobert, Frederick H. Schroeder and Charles H. Murray.

State Hospital for Consumptives.—The committee on Rules of the Assembly has amended Senator Davis's bill for the construction of a state hospital for consumptives, in the Adirondacks, so as to provide that the commission to review the selection of the site shall consist of the governor, the speaker *pro tem.* of the Senate and the speaker of the assembly.

New York State Cancer Laboratory.—The annual report of this institution has been transmitted to the legislature. It relates to the work of Dr. H. R. Gaylord in the protozoan cause of cancer, and speaks hopefully of the discovery of an antitoxin. After calling attention to the increase in cancer mortality in the state during the past year, and the importance of the work thus far done, a further appropriation of $20,000 is asked for, and $15,000 was appropriated to carry on further investigations.

To License Hypnotism.—The Senate has passed the McCabe bill which seeks to legalize and license hypnotism and mesmerism as taught in so-called schools for the purpose. The bill provides that neither hypnotism nor mesmerism shall be taught except in schools approved by the regents, and no one shall practice either, except physicians and surgeons, unless duly graduated from such school and his diploma registered with the county clerk. By this measure it is hoped to put hypnotists and mesmerists on a legal and licensed footing, and give the countenance of a state law to the practice.

Buffalo.

The monthly report of the Department of Health gives a death-rate of 14.57 per 1000.

Dr. Prescott Le Breton has been appointed assistant orthopedic surgeon at the Children's Hospital.

Dr. Charles F. Howard has been renominated by Governor Odell to be a member of the board of managers of the Elmira Reformatory.

A bill has been introduced at Albany to allow Charles E. Abbott, of Buffalo, to go through the medical department of the University of Buffalo and take the usual degree and afterward take the regents examination, which, as a rule, is required to be passed as a preliminary to entrance into a medical college.

New York City.

Dr. Morris J. Asch, after forty-six years of practice, is taking a year of rest.

Diphtheria has attacked so many of the 600 pupils attending the public school at Highbridge that the school has been ordered closed.

Arrests for Expectoration.—The Board of Health, on April 21, caused the arrest of thirty-two persons for spitting on the floors of street-cars and the decks of ferry-boats. Of this number, sixteen were held for trial and nine were fined from $2 to $3. It is thought that the publicity given to this crusade will act as a wholesome deterrent.

NORTH CAROLINA.

Smallpox was reported during March in twenty-five counties. In Green County 173 cases were reported.

State Board of Health.—The governor has made the following appointments: Dr. Richard H. Lewis, Raleigh; Dr. Francis Duffy, Newbern; Dr. George G. Thomas, Wilmington, and Dr. William P. Ivey, Lenoir.

State Examinations.—The regular annual session of the North Carolina State Board of Medical Examiners will be held in Durham, N. C., beginning May 16. Applicants desiring examination will carry with them a diploma from a college of medicine requiring not less than three years' attendance, evidences of clinical instruction, and certificates of character. The license fee is $10. The president of the Board is Dr. E. C. Register, Charlotte; secretary-treasurer, Dr. J. Howell Way, Waynesville.

OHIO.

Starling Medical College, Columbus, held its fifty-fourth annual commencement April 11. The graduating class numbered thirty-three, and the address of the evening was made by President W. O. Thompson, of the State University.

Ohio Medical University, Columbus, held its ninth annual commencement exercises April 16, graduating a class of forty-four. The address to the graduating class was made by Rev. Louis Edward Holden, president of Wooster University.

A controversy over smallpox, between health officers and physicians of Springfield, resulted in the calling of Dr. A. Ravogli, Cincinnati, as an expert. He found one of the patients free from any indication of this disease, while the other disputed case was undoubtedly smallpox.

School Investigation.—The *Cincinnati Post* has engaged Dr. S. P. Kramer, late major and surgeon, U. S. V., to make a sanitary investigation of the public schools of this city. The sewerage, ventilation, lighting, construction of seats, and the effect on the spine of uncomfortable or poorly adapted seats, water-supply, the manner of collecting and disposing of dust, and all other conditions that might effect the health of the pupils, will be studied. The investigation will include one school a day, and Dr. Kramer will be accompanied in his rounds by a medical member of the Board of Education.

PENNSYLVANIA.

A bill has been introduced in the state legislature making it unlawful for cities of the first class to reopen, for the purposes of sepulture therein, any grave in which any corpse may be interred.

An attempt was made to destroy the smallpox hospital at McKeesport, April 18. A can of gunpowder, with matches and a fuse, was found in the building. There were no patients in the hospital at the time.

Large Medical Bill.—Probably the largest medical fee ever presented in Pennsylvania is that of Dr. Walter C. Browning, of Philadelphia, against the estate of Christopher Magee, of Pittsburg, recently deceased, who is reported to have been worth several million dollars. According to reports, the bill

covers a period of twenty-one months, and includes trips to the seashore, and to Hot Springs, Va. The total amount of the bill is $190,000.

Philadelphia.

Dr. Lewis **Morris,** of the United States Navy, has been assigned to duty at the Naval Hospital of Philadelphia.

Dr. Samuel **D. Risley** has resigned, after a service of many years as professor of diseases of the eye at the Philadelphia Polyclinic. As a mark of appreciation of his services the Board of Trustees created the office of Emeritus Professor of Diseases of the Eye, to which Dr. Risley was elected.

Dr. **William Campbell Posey** has been elected professor of diseases of the eye at the Philadelphia Polyclinic, to succeed Dr. Risley, resigned. Dr. Posey is a graduate of the University of Pennsylvania, has studied abroad, and is connected with the Will's Eye Hospital, Howard, Epileptic, and Home for Incurables.

Smallpox.—Two new cases were reported in one day during the last week, and the total number is now eight. The cases have been found in various portions of the city. The first was discovered about three weeks ago, and two fatal cases have occurred. The patients have been removed to the Municipal Hospital and the infected houses quarantined.

As a **precaution against plague,** the Board of Health will take all the precautions possible to prevent the introduction of rats coming from vessels on board of which there is any suspicious disease. The medical board at Reedy Island will hereafter insist on a new style hawser, since it is believed that by the old style the rats have a means of reaching the shore.

The **Ptolemy Society,** the purpose of which is for social intercourse and to disseminate medical science, has been chartered with the following officers: Stilman Henry Conner, president; Bert Edward Goodman, vice-president; Atlee David Mitchell, secretary; Frank Cornelius Leytze, treasurer; and Drs. Hobart Amory Hare, Hiram R. Loux, Justus Sinexon, Edwin Russell Kennedy, and Dudley D. Smith, board of governors.

Obstetric Amphitheater.—Through the gift of Mrs. C. B. Newbold, the University of Pennsylvania has received $25,000 for the construction of an obstetrical amphitheater to be added during the present year to the University Hospital. The new addition will be known as the Scott Amphitheater, in memory of Mrs. Thomas A. Scott, Mrs. Newbold's mother. The building will be of brick, fifty feet square, and will accommodate 150 students.

Exhibit of Board of Health.—In response to an invitation by officials of the Pan-American Exposition, the Board of Health will make an exhibit showing its work. It has been completed under the direction of Chief J. Lewis Good and Dr. W. M. Welch of the Municipal Hospital. The exhibition consists of a handsomely bound portfolio, and contains a complete set of all circulars, blanks, health diagrams, photographs, etc., showing the sanitary work done throughout Philadelphia. The photographs include the city hall, Municipal Hospital, smallpox building, leper building, diphtheria ward, and disinfecting rooms of the Municipal Hospital, and other data.

TENNESSEE.

The **State Board of Medical Examiners** met at Nashville, April 4, and issued licenses to practice to ten of the thirteen applicants whom they examined.

Tennessee University Medical Department, Nashville, graduated a class of seventy-nine, on March 26. Dr. Perry Bromberg delivered the charge to the graduates.

Grant University Medical Department. Chattanooga, held its commencement exercises April 23, graduating a class of about sixty. The orator of the evening was Judge Floyd Estill.

Vanderbilt University Medical Department, Nashville, held its commencement exercises April 3, and graduated a class of ninety-one. Hon. W. A. Henderson, Knoxville, delivered the address to the graduates.

The **medical practice law,** at present in force in the state, requires the State Board of Medical Examiners to recognize diplomas of all colleges in the state. This list includes two "magnetic schools" and the "Chattanoogiense Gentiticium Medicum Collegium."

TEXAS.

Dr. **Absalom A. Ledbetter** has been appointed city health officer of Hallettsville.

Dr. **John Foster,** Georgetown, has been appointed third assistant physician at the State Lunatic Asylum, Austin.

Fort Worth University Medical Department held its seventh annual commencement, April 5. A class of twenty-six was graduated. The Faculty address was delivered by Judge B. D. Tarleton.

Temple Hospital has elected the following medical staff: Drs. Arthur C. Scott; Benjamin F. Lee; John M. McCutcheon; Victor Oatman; Robert W. Barton; John S. McCelvey; R. R. White; Lee Knight and James M. Woodson. The hospital association is prosperous and is planning to add a new wing to the hospital building.

UTAH.

Smallpox has broken out in the family of the author of the McMillan antivaccination bill passed by the recent legislature and vetoed by the governor on the ground that it "is a step backward, which will be disastrous."

The State Board of Medical Examiners met April 2 for organization and re-elected Dr. Elias S. Wright, Salt Lake City, president, and elected Dr. Robert W. Fisher, secretary. Five applicants for license appeared, two of whom passed the examination.

Smallpox in Salt Lake City.—Twenty-three new smallpox cases were reported in Salt Lake City the first week of April. There are now 120 cases under quarantine and in the isolation hospital. Of the twenty-three patients only two had been vaccinated, and these not later than 1866.

WISCONSIN.

The State Board of Medical Examiners, at its session in Milwaukee, April 9, refused to recognize diplomas of a southern medical college which requires only a three years' course. The board passed favorably on fifty-five out of sixty applications.

Frank X. Schaeffer, charged with practicing medicine without proper legal qualification, was found guilty and fined $50 and costs, to stand committed to jail until the money is paid. The costs will amount to $400 or $500, as this was the third trial of the case. The jury was out only ten minutes. He appealed at once on writ of error to the supreme court.

The Circuit Court has decided that the State Board of Medical Examiners has the right to determine whether an applicant for registration is a reputable resident physician, and its decisions on this question cannot be reviewed by mandamus. The decision was rendered in the case of a practitioner of Hillsboro, against the state board, he seeking to compel the board to grant him a certificate of registration.

CANADA.

Dr. R. A. Reeve has been reappointed dean of the medical faculty of Toronto University.

The Winnipeg General Hospital, for the week ending April 13, treated 198 patients—102 men, 53 women and 43 children. There were also 42 out-patients.

Sir William Hingston, on May 8, will have completed the fortieth year of his connection with the Hotel Dieu Hospital, Montreal, as consulting physician, and on that occasion will be tendered a *dejeuner* by the sisters of the institution.

McGill Items.—The graduating class numbered over one hundred, in medicine, this year. Dr. Ruttan, registrar of the medical faculty, has been re-elected representative from that faculty upon the corporation of the university. Dr. William Gardner has been chosen to deliver the valedictory of the faculty to the graduating class at the convocation to be held about June 15.

Honors Awarded.—Dr. Andrew Haliday, Shubenacadie, N. S., who has been studying during the past winter in the Pathologic and Public Health laboratories of the Western Infirmary and the University of Glasgow, has, after examination, been awarded first class honors with first place in the sanitary division of the class of pathology and bacteriology, and also a diploma in State Medicine.

Ontario's Smallpox.—The smallpox outlook throughout Ontario is brighter, although within the past two days four or five new cases have been discovered in Toronto, and one of these, a medical practitioner, who contracted the disease while attending a supposed case of chickenpox. The men employed in the lumber camps of the northern part of the province have all left for their homes, and some five thousand of them have been vaccinated, and two thousand pieces of baggage disinfected at Sudbury. At present the disease exists in some fifteen centers west of Sudbury, and in thirty in what is called Old Ontario. All persons going north for the next few months, to work on boats and at summer resorts, will be examined.

"Christian Science" in Canada.—"Christian Science" is said to now boast of a little over 5000 adherents throughout all Canada; and lately there has been noticed a marked tendency among clergymen of all denominations to make a concerted and vigorous attack upon what they regard as the growing evils and delusions of this doctrine. In Toronto, in a number of the prominent churches, the subject has been taken up repeatedly of late, and the ministers of the city, though by no means unanimous in their views of Mrs. Eddy's belief, have broadly and generally made determined onslaughts on her doctrines. Starting in Canada with a membership of only a score or two in 1890, the sect is believed to have a membership of 3000 and about 5000 adherents. It has thirty-two churches scattered over all parts of the Dominion; four of these are owned. In Toronto there are about 500 "Christian Scientists" attending the two churches that city possesses. It is said that no adherents are drawn from the Roman Catholic Church.

Medical Convocation.—The convocation of the medical and dental faculties of Bishop's College, Montreal, was held last week. Dean Campbell, of the medical faculty, in his annual report spoke of the need for larger endowments for the faculty if it is hoped to carry on the work of teaching in the future as successfully as it has done in the past. The primary chairs especially require assistance, as they can not be filled at the present time by men who enjoy large practices. The year just closed shows an increase in the medical faculty and a decrease in the dental, perhaps due to the additional year now demanded and a more searching preliminary examination. There were eighty-four medical students in attendance last session. Dr. Hyman Lightstone delivered the valedictory.

Registration in Ontario.—It costs each student $100 to become a licentiate of the College of Physicians and Surgeons of Ontario. An annual fee of $2 is then demanded and every practitioner is required to pay this fee and be registered on the register of the College. Some ten years ago a storm was raised over this very same fee and many practitioners have refused to pay it at all. Now a number are in arrears and they have been notified by the prosecutor of the Medical Council that their names have been already erased from the register and that if arrears for assessments are not paid within thirty days from date of notice they will be proceeded against in the usual way as against all other unregistered practitioners. The Medical Council is composed of practitioners, representatives from different constituencies in the province.

Montreal's Sewerage.—The Sewage Farm in Montreal, a description of which appeared in the columns of THE JOURNAL about fifteen months ago, is now in an awful condition and has proven a flat failure. The farm, which is situated at the head of St. Denis St., in that city, and into which the sewage from the northern portion of the city has been emptying, cost in the neighborhood of $75,000, and to-day is useless, and the raw sewage is seen rolling across country and into the Back River, constantly emitting a foul stench. The whole volume of sewage from the sewer outlets empties itself into the surface of the farm at one end and then rushes out at the other, and on as above described. The people living in the neighborhood threaten the city with legal proceedings unless the nuisance is abated at once. It appears that when the farm was in course of construction a double set of pipes was advised by the city surveyor, but his advice was disregarded, and Montreal now finds herself up against another source of danger from disease through the coming summer months.

Prevention of Tuberculosis.—A special meeting of the Executive Committee of the Canadian Association for the prevention of tuberculosis was called at Ottawa on the 20th. His Excellency, Lord Minto, in the chair. Dr. Lachapelle, of Montreal, was added to the committee. On resolution it was decided that all the secretaries of the provincial boards of health should be corresponding members of the Executive Committee. The Rev. Dr. Eby, of Toronto, has been appointed special organizer and agitator in the Providence of Ontario, for a period of six months, in order to prosecute a systematic campaign of education on the line of providing municipal sanitaria. Toward this end the central association granted $300. Dr. Eby in the meantime resigns the secretaryship of the Canadian Association, and Dr. H. B. Small, of Ottawa, has been invited to act as honorary secretary.

FOREIGN.

The Soemmering Prize.—This has been awarded by the Senckenburger Natural History Society of Frankfort to Prof. Franz Nissl, of the University of Heidelberg, for his discoveries in the finer structure of the nerve cell, with especial reference to its alteration in disease.

University Chair.—The Wurtemberg Chamber has voted anew for the founding of a chair of homeopathy in the University of Tübingen. The Cultus Minister, von Weizsacker, and the chancellor of the University, von Schönberg, fought the proposition energetically, but in spite of this it was carried by 43 to 31 votes.

Honors to Bottini.—A committee of the friends and students of Professor Bottini are planning to celebrate the twenty-fifth anniversary of his appointment to the chair of surgery at Pavia. A *Festschrift* or souvenir volume of original articles on surgery will be presented to him, with a gold medal and a framed parchment list of all subscribers. I. Tansini is secretary of the committee and the subscription asked for is twenty lire, or about $4.

Requirements in Brazil.—The *Gazeta Med. da Bahia* for March is a students' number and describes the two medical colleges in Brazil, both of which have been open to women since 1879. Six women have taken the full course at the Bahia institution, which commenced as a school of surgery in 1808 and became transformed into a college in 1852. The requirements for admission are a high school course or a certificate of proficiency in Portuguese, French, English, or German, Latin, algebra as far as equations of the first degree, history, etc. For a course of obstetrics the requirements are merely proficiency in Portuguese and either French or English or German, and a knowledge of arithmetic as far as and including proportion.

Belgian Federation.—The profession has watched with much interest the struggle between the Brussels medical society, the collège des médecins, and the Belgian federation of mutual aid societies. Six years ago the physicians engaged by the federation resigned their positions on account of its arbitrary terms and demands and their position was endorsed by the local medical societies. Certain physicians were found, however, who acceded to the demands and the federation thus practically gained its point, although it has continued to make overtures to the former medical attendants and others. The collège des médecins officially decided, at a recent meeting, to revoke its former action and remove all hindrance to the acceptance of positions with the federation by any of its members.

Smallpox at Glasgow.—The number of cases has been steadily decreasing. On April 9 there were 234 cases in hospital. In the week ending April 5, 45 new cases were admitted, 100 patients were discharged, and 6 deaths occurred. Dr. Chalmers, the medical officer of health, has reported some interesting figures regarding the influence of revaccination. Among the patients were 39 persons who stated that they had been revaccinated; in 36 the date of revaccination and of the onset of smallpox were ascertainable. In all, the interval between revaccination and sickening fell short of the inoculation period, so that in none was the operation performed before the disease was contracted. This very cogent fact, however, has not silenced the antivaccinators, and they have held a series of meetings in the city.

Progress of the Plague.—In Cape Town 22 Europeans and 108 colored persons have died from plague, while the total number of cases has been 83 in Europeans, and 266 in colored persons. In the week ending March 30, there were 60 new cases, as follows: Europeans, 18; colored, 29; Malay, 6; Indian, 2; Chinese, 1; natives, 4. The 22 deaths in the same period were: Europeans, 6; colored, 9; Malay, 5; Indian, 2; natives, 2. The total number of cases during the week ending March 16 was 8829, a considerable increase on the previous week. In the city of Bombay there were 1203 deaths—a slight increase on the previous week. The condition of the city is twice as bad as at this time last year. In the Bombay presidency, 717 deaths occurred. In the Madras presidency 73 deaths were reported, a decrease on the previous week. In the northwestern provinces there were 557 deaths and in the Punjab 105. In Calcutta, on March 19 and 20, there were 168 and 190 new cases of plague, and 161 and 154 deaths—unprecedented numbers. A death from plague is reported to have occurred in Alexandria on April 7, which is the first case for twelve months.

PARIS LETTER.

The Doctor on the Stage and in Literature.

The rôle of the physician in contemporary life is the subject of quite a number of plays brought out recently. In one by Brieux, a playwright, called the "Substitutes," the question of nursing is discussed. There are two doctors in the cast: one, the type of the fashionable physician, sacrifices his principles to the inclinations and the requests of his clients, who

prefer to hire nurses, whereas the other, who is from the country, upholds the author's idea, which is that mothers should always nurse their children if possible. This play serves to educate the public, and moreover a law passed not long ago in France forbids a woman hiring herself out as a nurse until her child is 7 months old. In literature too, one can find quite a number of books which deal with medical subjects. One published recently is called "Le Mal Nécessaire," *The Necessary Evil*, and is a study of the life and practice of a great surgeon of a certain familiar type. The book is a species of satire on the tendency shown by such to operate brilliantly and cleverly, without perhaps justifying their actions by a sufficiently clear conception of the requirements of any given case. Surgeons are much talked about in the French papers, much more so than they are in America, and it is getting to be rather bad form to have one's name appear in the newspapers.

Russian Sanatorium.

The tsarewitch, who died some time ago at Nice, was buried at the villa Bermond, and the ground around the estate was bought up by the Russian government. There is some reason to believe that a sanatorium for the Russian poor is to be established in this place, and Prince Georges of Leuchtenberg is at the head of this enterprise.

Influence of Bile on the Kidney.

According to most text-books, bile has a pernicious influence on the kidney, and its elimination in the urine causes albuminuria. Dr. Milian has studied the question carefully, and, at a recent meeting of the Anatomical Society, said that he had examined the kidney in Hanot's disease, or hypertrophic cirrhosis, and had found no reason to accept such a statement. There is, as everyone knows, choluria in this disease, and yet albumin is not even found in the last stages of this malady. Polyuria is generally noticed, as much as two liters being secreted every twenty-four hours. On performing the autopsy, the kidneys are found slightly enlarged, sometimes very much so, weighing together 610 grams instead of 280. On examining them microscopically, no alterations are found, both tubes and glomeruli being in a normal condition.

Exophthalmic Goiter.

At a recent meeting of the Society of Neurology, Dr. Babinski described the results he had obtained in the treatment of exophthalmic goiter by salicylate of soda. In one case a woman, 28 years old, began to show symptoms of this affection nearly three years ago. Since January, 1899, the symptoms have increased considerably, and in February there was a clearly defined goiter, very apparent exophthalmia, tremulation in the arms, and the pulse was 140. The patient had grown much weaker and lost flesh. The treatment by salicylate of soda was recommended and continued several months. In October, 1899, the condition of the patient was absolutely transformed. The pulse was only 80, the goiter and tremulation had disappeared, the patient's strength had returned and she had increased in weight. Toward the end of last year all exophthalmia had disappeared. Dr. Babinski also cited two other cases where noticeable improvement followed the use of salicylate of soda.

Intestinal Hemorrhage in Typhoid.

At a meeting held by the Society of Therapeutics, March 13, Professor Mathieu spoke on the treatment of intestinal hemorrhage in typhoid fever by very hot enemata. This method had been recommended by Dr. Tripier, but Dr. Mathieu thought it well to add chlorid of calcium. The treatment is carried out in the following manner: 1, complete immobilization of the patient—suppression of the baths, which are replaced by the cold pack; 2, immobilization of the intestine—opium and reduced amount of liquid food; 3, every morning an enema of a liter to a liter and a quarter at a temperature of 46 degrees, given very cautiously—pressure 20 to 40 centimeters. This enema should contain three to four grams of chlorid of calcium. One to 3 grams of chlorid of calcium are given by the mouth. Dr. Mathieu does not believe in giving more than 3 or 4 grams of chlorid of calcium, as when larger doses are given the coagulability of the blood is diminished instead of being increased. This method was tried on eight patients, and Dr. Mathieu found that the hemorrhage ceased after twenty-four hours. One great advantage of administering enemata in this manner is that the blood which remains in the intestine gets putrified and is the cause of an increase in the fever and the typhoid symptoms. Dr. Mathieu added that he prefers subnitrate of bismuth to naphthol as an intestinal disinfectant. He gives it in doses of 5 grams three times daily. He has found naphthol more irritating.

LONDON LETTER.

Sir William Church, the present president of the Royal College of Physicians, has been re-elected.

Bilateral Ossification of the Tendo Achillis and Plantar Ligaments.

At the Harveian Society, Mr. Daniel recently showed a case, in a man, aged 35, who had suffered from rheumatic pains all his life. His father was also rheumatic. The patient, for as long as he could recollect, had had tender feet. At 18 he was exposed to bad weather, took a chill and suffered from great pain in the feet, especially in the heels. Since then he has always been more or less crippled. Marked shooting pains were often present in the pectoral muscles of the back, deltoids and glutei, rendering him unable to move his limbs, the joints appearing fixed. No swelling of the joints was noticed. He walked with difficulty. There was no evidence of myositis ossificans and he had good movement in the back and all the joints, including the ankles. The heels were slightly enlarged and glossy and tender. For 1½ inches above the os calcis an irregular mass could be seen and felt on either side of, and propably on, the tendo Achillis. Cold, damp, and walking increased the pain. There was some rigidity of the great toes. Liniments, especially of iodin, and iodin internally gave relief.

Dangers of Flannelette.

An inquest has been held on the body of a servant girl who was recently burned to death. While cleaning a grate a cinder fell out and set fire to her petticoat, which was made of flannelette. The coroner remarked that flannelette is a most dangerous material, and that when once lighted there is no hope of extinguishing it. Deaths from the catching fire of flannelette night-shirts have been previously recorded.

Correspondence.

Conveyance of Yellow Fever.

BALTIMORE, MD., April 20, 1901.

To the Editor:—Relative to the editorial notice in THE JOURNAL of the 13th, on a paper of mine that appeared in the *Philadelphia Medical Journal* of April 6, "on the Corelation of the Theory of Conveyance of Yellow Fever by the Culex Fasciatus, with our Generally Accepted Beliefs," I would say:

1. My paper was written about the first of December last, when Finlay's experiments and Major Reed's "Preliminary Note" were the only *direct* evidence extant in favor of the conveyance of yellow fever by the mosquito as a host. Neither of these seeming to me—nor, I think, to others—fully convincing I attempted to compare this theory, without regard to this evidence, with what was known and admitted on the subject, to try to determine if it were antecedently probable or improbable. The paper is confined to a bare statement of the case, purposely avoiding summing up, although I think a decided antecedent probability was shown for the theory. Since the publication of Reed's "Additional Note" (in February) this matter—the antecedent probability of this theory of conveyance—is of small importance. The direct evidence for it is satisfactory and, counting the conveyance of yellow fever from the sick to the well by a mosquito host as proven by such evidence, there is no question of probability to consider. 2. I can not think that the period of incubation of yellow fever will be found to vary analogously to that of malarial fever. In thirteen cases of experimental yellow fever, reported by Reed, the period of incubation was never over six days; in ninety-five collected and recorded by myself (*Medical Record*, March 9, 1901), in none did this period show over eight days, and in only two over six days, the usual period being from three to four days. We have no trustworthy evidence of an incubation period much beyond the limits given above. Save the transmission by a host, there is little analogy between yellow fever and malarial fever. There is no chronic yellow fever, there is no recrudescence of yellow fever in a patient; there are no "hold over" cases of yellow fever; and, finally, there is a very general—almost universal—immunity to yellow fever produced by one attack. To my mind the analogy is rather with Texas cattle fever than with malarial fever. Respectively,

H. R. CARTER, Surgeon, U.S. M.-H. S.

Implantation of Ureters.

NEW YORK CITY, April 11, 1901.

To the Editor:—In view of the fact that the patient on whom I operated for implantation of the ureters into the rectum by a new method, as described in the *American Journal of the Medical Sciences*, Vol. clv., pp. 270-276, is still living and enjoying the best of health at the end of 4½ years—not 3½ years, as stated by Dr. Peterson. I wish to protest against paragraph 3, in the General Conclusions at the end of his article on "Ureteral Anastomosis" (THE JOURNAL, March 23, p. 814), in which he says: "All efforts to prevent ascending renal infection in animals or in man where the ureter has been implanted without its vesical orifice have proved futile." In order to support the contention that the "operation is unjustifiable" (paragraph 5, General Conclusions), he endeavors to assume that, in my case, "the kidneys have been infected, but that the infection has been overcome with resulting contracted kidneys." This assumption in the absence of the slightest suspicion that such has actually occurred in the case, would seem to be in a great measure gratuitous, if not absolutely unwarranted, even though "experimental work would lead us" to such a conclusion.

Further, I wish to call attention to the alleged foundation for thus discounting, and even practically ignoring, the result in this case. It would appear, by a paragraph on the same page, that Dr. Peterson performed the operation on a dog, implanting one ureter, and killed the dog at the end of twenty-seven days. At the autopsy the kidney corresponding to the implanted ureter was found to be "decidedly smaller than the other and showed evidences of ascending infection. *No bacteriologic or microscopic report on the specimen has yet been made*" (italics mine).

Beyond calling Dr. Peterson's attention to the fact that the mucous valve formation is neither the only nor the most important feature of the operation in question, and that therefore its disappearance in the case of the dog need not necessarily militate against the procedure, it is scarcely necessary for me to waste your space by further comment. Yours very truly,

G. R. FOWLER, M.D.

Immunity Against Zymotic Diseases.

TOPEKA, KANS., April 18, 1901.

To the Editor:—I have read, with appreciation, the article on "Immunity Against Zymotic Diseases," by Dr. J. W. Class, published in THE JOURNAL of April 13, and have been much impressed by the author's lucid exposition of what is generally considered a perplexing theme.

The rather unique theory advanced by the author particularly attracted my notice, because its essential features had all been presented and elaborated in a paper of similar import, read Feb. 18, 1901, before the Medical Science Club of Topeka, by Dr. O. P. Davis, of this city, the original of which is in my keeping as secretary of that organization. In this paper, Dr. Davis, after canvassing the various theories of immunity, and pointing out their insufficiency, arrives by a process of deductive reasoning at what seems to be a new and plausible theory embracing all that Dr. Class sets forth, and more. The following main propositions were developed:

1. Acquired immunity is due to the continued presence in the body of the specific microbe of the given disease, in a form sufficiently attenuated to be tolerated by the host, and yet sufficiently active to stimulate the production of an antitoxin.

2. Germs may undergo attenuation outside, as well as within, the body, and entering the body, thus attenuated, may confer protection without typical infection.

3. During the whole time that this immunity continues the attenuated germs continue to reside in the protected body.

4. Such germs as will not undergo a stable attenuation, but tend to revert to the virulent type, will not confer permanent immunity by their presence in the body, but bring about either an immunity that is transient, or an increased susceptibility with subsequent reinfection, or both.

All these propositions were amply developed in Dr. Davis's paper, and though Dr. Davis set forth no special claim to originality on this subject, yet it seems that he has the priority over Dr. Class at least, in the enunciation of what appears to be a well-sustained theory. Very truly,

CORBAN E. JUDD, M.D.

Anesthesia of Ear Drum.

MEMPHIS, TENN., April 3, 1901.

To the Editor:—In Dr. Henry Gradle's recent article on "Purulent Otitis, Its Treatment and Prevention by the Family Physician" (THE JOURNAL, March 30), in speaking of paracentesis of the drum membrane, he says that it is a painful procedure and the pain is not lessened by any of the local anesthetics. I would like to mention a combination of local anesthetics which I have found to act admirably in producing an anesthesia of the drum, permitting painless paracentesis. The mixture is equal parts of cocain, carbolic acid and menthol. It is attributed, I believe, to Bonain (*Rev. Heb. de Lar.*, June 17, 1899), and I claim no originality in connection with it. I have used it many times this winter with invariable satisfaction. After cleansing and drying the canal, I have applied this mixture with a cotton-tippel applicator directly to that portion of the drum which I wished to incise. In a moment the surface becomes white, and this is convenient in that it becomes easier to confine your incision to anesthetized parts. While I have used it mostly in adults, I have also tried it in children, and in them it is equally successful if you can allay their fears over the prospect of being cut. In one woman I did double paracentesis at one sitting without pain, and later in the progress of the case it became advisable to enlarge the too rapidly closing incision. This was done under the same mixture, and again without pain. I would like to urge on my colleagues in otology the use of this mixture, with which I am sure they will be pleased. Another popular mixture for the same purpose was suggested by A. A. Gray, in *The Lancet* of April 21, 1900, and is composed of cocain, alcohol and analin oil, in the proportion of 5 per cent of the alkaloid in equal parts of the other two ingredients, but I have had no experience with it. Very truly,

E. C. ELLETT, M.D.

Original Papers Used for Advertising.

PHILADELPHIA, April 16, 1901.

To the Editor:—In reference to the communication from Dr. Harvey, on page 1058 of THE JOURNAL of April 13, I would say that this matter did come to my ears very shortly before I saw his letter. I at once wrote to the manufacturers, who have so used my article, to stop all and every use made thereof, which they very promptly promised to do. That I never knew anything about the uses thus made, is a sufficient answer to the question at issue. If this is not satisfactory, I respectfully refer to the manufacturers, who have expressed great regret for using my paper at all, which was a sufficient apology to me, and I hope satisfactory to Dr. Harvey also

Yours, EDWIN ROSENTHAL, M.D.,
Former Chairman of the Section on Diseases of Children.

Life Expectancy in Medical Men.

BURLINGTON, N. C., April 11, 1901.

To the Editor:—Having seen it stated that medical men are shorter lived than those of other professions and trades, I have collected from the obituary notices in THE JOURNAL in succession as the deaths occur, the ages of 510 physicians, in the United States, Canada, and Europe. These statistics include deaths from accident and suicide, as well as those from disease. I find the average age to be 58 years and 9 months, not such a bad showing for the longevity of the physician after all, especially as the cases from accident and suicide, as well as casualties in the army service, are included. Yours truly,

W. G. SAFFORD, M.D.

Association News.

The Growth of the American Medical Association.—As the time draws near for the Association's next annual meeting, interest in its affairs naturally grows more active among the profession at large. As to the meeting itself, which is to be held in St. Paul on the 4th, 5th, 6th, and 7th of June, there can be but one opinion and but one confident expectation, namely, that it will be at least the equal of any former meeting of the same body, whether from the point of view of the scientific work that will be done or from that of a reunion of the best elements of the American profession. As one annual meeting after another approaches, however, one's thoughts turn more and more on questions more closely bearing upon the Association's future usefulness than most of the proceedings that are likely to mark the occasion. The AMERICAN MEDICAL ASSOCIATION has accomplished a great work, but is it, as at present organized, fitted in the best possible manner for the work that is yet before it? There are those—and they are among the Association's best friends—who, recognizing fully that it was originally organized in a way admirably fitting it to cope with the problems of half a century ago, are inclined to think that changed conditions call for some modification of its machinery if it is to keep on doing for the profession the best that can be expected of such a body. When the association was organized, American medicine was in a decidedly unpromising state. There was, to be sure, no lack of brilliant and progressive men in the profession, but the teaching faculties were almost entirely irresponsible bodies, issuing at their pleasure diplomas which, while certifying to but little that a man could be proud of, gave their holders unquestioned prestige with the general public. Everybody had the right to practise medicine, and quackery was rampant. Authoritative pronouncements by the better class of physicians were required to educate the people up to the point of remedying these evils. Such have proceeded from the AMERICAN MEDICAL ASSOCIATION and from other medical organizations, and they have slowly taken effect. They were authoritative in proportion as they came from a representative body. It was seen at the outset that this would be the case; hence the delegate system in the Association's organization. But the delegates have now become so numerous, about fifteen hundred in all, that, though there are always many absentees, the general session is almost sure to be unwieldy on occasions when a conflict of opinion is to be settled by a vote, many uncalled-for speeches are apt to be made, not a few of the voters fail to get an adequate idea of the merits of the question, and emotion rather than calm judgment is prone to carry the day. All this hinders the real purposes of the meeting so far as legislative action is concerned, and it diverts men's minds from the scientific work in hand, to say nothing of the waste of time entailed. Quasi-legislative action on the part of the Association—and by that term we mean the adoption of resolutions, memorials, and the like, calculated to influence State and national legislation—seems to have become less and less important of late years, for the defects which it was formerly needed to correct have been almost wholly remedied. A decided reduction of the number of delegates, the proportion for each constituent body remaining the same, would, it seems to us, enhance the scientific work done in the sections and give time for a greater number of formal addresses, papers of general interest, and demonstrations. There need be no limit to the number of non-voting members, so that the attendance at the meetings would go on increasing as it has done up to the present time. In short, we can see no objection to a decided curtailment of the representative element, and we believe that it would prove advantageous. Such a move, we are quite aware, would involve practically a reorganization of the Association; if our ground is well taken, however, why should not a reorganization be effected?—*New York Med. Jour.*, April 20.

The Pathological Exhibit in St. Paul.—Last June we had the pleasure of commending the enterprise and good judgment of some of our Indiana brethren as shown in the exhibition of pathological specimens given in connection with the Atlantic City meeting of the AMERICAN MEDICAL ASSOCIATION. We were convinced that it could not have failed to make a most favorable impression, and we are glad to have our view confirmed by the announcement that a display of practically the same scope is to be made in St. Paul in June, this time under the Association's official recognition and as an integral part of its work. The committee in charge of the St. Paul exhibition, consisting of Dr. Frank B. Wynn, of Indianapolis; Dr. A. P. Ohlmacher, of Gallipolis, Ohio, and Dr. Hugo Summa, of St. Louis, has recently issued a circular of information from which we infer that a similar exhibition is hereafter to be a feature of all the Association's annual meetings. Gross pathological specimens, it is stated in the circular, will naturally constitute the greater part of what is to be displayed, but the committee add that they "will seek to present a wide range of practical scientific demonstrations, imposing only the condition that they bear absolutely no commercial impress." The educational object is to be kept constantly in view, particularly that of demonstrating the fundamental relationship of pathology to diagnosis, therapeutics, and sanitary science. In addition, however, to the pathological specimens, the committee will make an effort to present demonstrations of research and experimental investigation, which, it is quite properly remarked, will tend to stimulate original inquiry among the members of the Association, all of whom are appealed to to contribute specimens. It is suggested that in many instances such contributions may advantageously be made in connection with papers read before the sections. Besides their appeal to individual members of the Association, the committee urges upon State and other medical societies that they should select representatives to collect and present material on their behalf. Substantial co-operation is expected on the part of medical colleges, hospitals, laboratories, and various scientific institutions, among them, we hope, the Army Medical Museum. It is announced that an energetic local committee is charged with securing suitable quarters for the exhibition, separate and distinct from those of the commercial exhibits. Contributors are asked to have their material well in hand by the 1st of May, and to furnish the committee with complete lists of their specimens by the middle of that month. Institutions will be encouraged to present groups of specimens illustrative of some particular phase of pathology or bacteriology, and will be permitted to maintain them intact, but smaller collections and single specimens entrusted to the care of the committee will be disposed in the manner best suited to display their instructive features. It is asked that, so far as possible, all pathological specimens be accompanied by a history of the case and, unless the condition is so typical as not to call for it, a description of the specimen. Copies of the circular—which, by the way, is remarkably well written—together with further information, may be had by writing to Dr. Frank B. Wynn, No. 18 East Ohio Street, Indianapolis, to whom and to his fellow-members of the committee, we must add, the physicians of the whole country should feel indebted for their intelligent and zealous management of this most important undertaking.—*New York Med. Jour.*, April 20.

Section on Materia Medica, Pharmacy and Therapeutics.

PROGRAM OF SECTION ON MATERIA MEDICA, PHARMACY AND THERAPEUTICS.

Mode of Manufacture of Serums and Organ Extracts. Charles T. McClintock, Detroit, Mich.

Theory and Practice of Organotherapy. S. Solis-Cohen, Philadelphia.

Acromegaly Treated with Pituitary Body. Sydney Kuh, Chicago.

Treatment of Graves' Disease with Thymus Extract. John M. Dodson, Chicago.

Pharmacologic Action of the Various Preparations of the Suprarenal Gland. E. M. Houghton, Detroit, Mich.

Discussion on Organotherapy to be opened by Victor C. Vaughan, Ann Arbor, Mich.

Utility of Antitoxin Serums. Joseph McFarland, Philadelphia.

Further Observations on Serumtherapy in Croupous Pneumonia. J. C. Wilson, Philadelphia.

Antitubercle Serum. E. A. de Schweinitz, Washington, D. C.

Discussion on Serumtherapy, to be opened by Simon Flexner, Philadelphia.

Influence of Certain Common Remedies upon Gastric Functions. Boardman Reed, Philadelphia.

Treatment of Gastric Ulcer. Gustav Fütterer, Chicago.

Treatment of Gastric Hyperesthesia. Charles G. Stockton, Buffalo, N. Y.

On the Therapeutic Management of Dyspepsia from the Neurologist's Standpoint. C. H. Hughes, St. Louis, Mo.

Discussion on Gastric Disorders, to be opened by James B. Herrick, Chicago.

Chronic Myocarditis. J. H. Musser, Philadelphia.

Treatment of Neurasthenia. Harold N. Moyer, Chicago.

Therapeutic Indications Presented by the Conditions of the Blood in Disease. O. T. Osborne, New Haven, Conn.

Experimental Work in Intraorganic and Venous Injections and Blood Extraction in the Cure of Acute Organic Diseases. W. Byron Coakley, Chicago.

An Analysis of Cascara Sagrada. L. L. Solomon, Louisville, Ky.

Standardization of Crude Drugs and Galenical Preparations. A. B. Lyons, Detroit, Mich.

A Plea for More Uniformity and Strength in Our Armamentarium. C. F. Wahrer, Ft. Madison, Iowa.

Indication for and Utility of Altitude Treatment of Pulmonary Tuberculosis. S. E. Solly, Colorado Springs, Colo.

Adaptability of Southern California and Similar Climates to the Needs of Consumptives. Norman Bridge, Los Angeles, Cal.

Specific Treatment of Pulmonary Tuberculosis. E. L. Shurly, Detroit, Mich.

Tuberculin Treatment of Pulmonary Tuberculosis, with Statistics. Charles Denison, Denver, Colo.

Specific Therapeutics in Pulmonary Tuberculosis. Arnold C. Klebs, Chicago.

Discussion of Treatment of Tubercular Disease of the Lungs, to be opened by R. H. Babcock, Chicago.

Treatment of Lobar Pneumonia. De Lancy Rochester, Buffalo, N. Y.

Papers have also been promised by Drs. Frank Billings, Chicago; J. Edward Stubbert, Liberty, N. Y.; John V. Shoemaker, Philadelphia; Geo. F. Butler, Alma, Mich.; H. M. Whelpley, St. Louis, Mo. The titles are to be announced.

Book Notices.

A SYSTEM OF PRACTICAL THERAPEUTICS. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, Second Edition, Revised and Largely Rewritten. With Illustrations. Vol. I. General Therapeutic Considerations, Prescription Writing, Remedial Measures other than Drugs, Preventive Medicine, Diathetic Diseases and Diseases of Nutrition. Pp. 856. Vol. II. Fevers, Diseases of the Respiratory and Circulatory Systems, Diseases of the Digestive System and Kidneys, Nervous Diseases and Diseases of the Skin. Pp. 926. Vol. III. Anesthesia and Surgical Technique, Fractures and Dislocations, and Minor Surgery. Surgery of the Lungs and Pleura and of the Peritoneal Cavity, the Rectum and Anus, Diseases of the Genito-Urinary Apparatus and of Parturition and of the Puerperium, Diseases of the Eye and Ear and of the Upper Respiratory Tract. Pp. 841, 3 vols. Price $15.00. Philadelphia and New York: Lea Brothers & Co. 1901.

This valuable composite handbook of treatment, so well received by the profession when it first appeared nine years ago, comes to us now in a new edition, and largely in new form and authorship. It is hardly the rule for works of this kind to pass to a second edition, but this is one of the exceptions. Naturally in view of the advances that have been made a thorough revision was to be expected, and more than this has been furnished in the present work. A large part of the articles have been completely rewritten so that the matter is altogether new, and in most cases this has been insured by a change of authors. Further than this, several entirely new chapters have been added either on subjects not included in the former edition or as amplifying and specializing the treatment. The arrangement of the work, as will be noted by those familiar with the earlier edition, has also been considerably altered.

In the first volume the subject of mineral waters and their medicinal uses, which was included with the general subject of hydrotherapy in the earlier edition, is given a separate chapter and treated with greater fulness and thoroughness, by Dr. James K. Crook. Another article notably changed is that on tuberculosis, by Dr. L. F. Flick, which is brought up to meet the views as modified during the past ten years. It is thoroughly modern in all respects. Diseases of the thyroid have also received an entirely new chapter, by Dr. S. J. Meltzer, giving the latest established facts as to the treatment of these disorders, among which obesity and its thyroid treatment are included. Other subjects that are handled anew in this volume are those of syphilis, massage, disinfection, and scorbutus.

In the second volume, fully two-thirds of the matter is entirely new, and the remainder has been thoroughly revised and brought up to date. Among the new articles with new authorship may be mentioned those on malaria, by J. M. Anders; diphtheria, by Floyd M. Crandall; typhoid fever and pneumonia, by H. A. Hare; liver disorders, by J. H. Musser; asthma, bronchitis, etc., by Norman Bridge, renal diseases, by N. S. Davis, Jr., which with a number of others, also new, make up the bulk of the volume.

In the third volume there is hardly fifty pages not altogether new, the only articles not completely rewritten by different authors being those of Dr. Ransohoff on cerebral concussion, etc., and Dr. Martin on intestinal obstruction. It is practically a new book and this can be said to be the case with the system as a whole. We miss the names of many of the well-known authors of the first edition, but those of the second are hardly, if at all, less familiar and welcome. There is an advantage in this, which is not gained in most new editions; the older book need not be discarded but still kept as a valuable series of therapeutic monographs for reference. In its present form the first volume is nearly one-half, the second two-thirds, and the third almost altogether of different authorship from the first; it is also more condensed and by this space is made for new subjects not noticed in the earlier edition and here included. The new edition deserves fully as cordial a reception by the profession as did the last.

HYPNOTISM AND SUGGESTION in Therapeutics, Education and Reform. By R. Osgood Mason, A.M., M.D., Fellow of the New York Academy of Medicine. Cloth. Pp. 344. Price $1.50. New York: Henry Holt & Co. 1901.

The author has presented certain phases of hypnotism which are at present of special interest. These seem to be largely the psychic element in general therapeutics, what he calls "rapport" or what we should otherwise call telepathy and the ethics of hypnotism. He also gives considerable attention to the peculiar phases of medical disorders that have been reported from time to time as cases of double consciousness, of which Azam's noted case is perhaps the type. The points in which we should especially disagree with the author are the extreme views which he holds as to the therapeutic value of hypnotism, reporting as he does cases of epilepsy, neuritis and other organic diseases temporarily or permanently cured. Some of his cases reported are a little hard to credit, not as to facts as believed, but as to their interpretation. The author's views concerning "rapport," though supported by numerous stories or accounts, some of them from investigations of the Society of Psychic Research and some from other quarters, seem hardly acceptable scientifically. We can not say positively that certain things have not been done, but under the most favored conditions in which these have been attempted in our presence, they have failed, and we believe that a thorough study would eliminate a large number of these cases from the category of proven facts. Recognizing as we do the limitation of our intellects and the mysteries that are all about us, we must not be too positive in saying what may and may not be done, but judicial skepticism seems to us the most rational course. The practical value of hypnotism so far as we have seen its work in medicine seems to be greatly overrated in the present volume; the views expressed are not in accordance with the experience of the medical profession. The book is well written and naturally makes very interesting reading. The only thing is how far it should be accepted as scientific truth. There is no need of questioning the honesty of the author's view and the opinions he holds are those of many others, but we doubt their acceptance by the medical profession.

SANITY OF MIND: A Study of Its Conditions and of the Means of Its Development and Preservation. By David F. Lincoln, M.D. Cloth. Pp. 177. Price, $1.25. New York and London: G. P. Putnam's Sons. 1900.

This little volume by a physician who is already known as an author on subjects of public health is an excellent and popular presentation of the general subjects of mental hygiene.

The subjects taken up in detail are: 1. The outlook of the present tendencies as regards mental health. 2. Nature of mental derangement. And following this, in natural order, is the subject of degeneracy. Under this head are briefly described the principal stigmata and their psychic and moral associations. The largest part of the book is given to the subject of education, including self-education, which is treated in a separate chapter. It also contains a concluding chapter on social and civic duties in relation to mental soundness and its maintenance in the community. The book is one that will be profitable reading for educators, and for parents and citizens generally.

INFANT-FEEDING IN HEALTH AND DISEASE. A Modern Book on all Methods of Feeding. For Students, Practitioners, and Nurses. By Louis Fischer, M.D., Attending Physician to the Children's Service of the New York German Poliklinik; Bacteriologist to St. Mark's Hospital; Professor of Diseases of Children in the New York School of Clinical Medicine; Attending Physician to the Children's Department of the West-side German Dispensary; Fellow of the New York Academy of Medicine, etc. Containing 52 Illustrations, with 16 Charts and Tables, Mostly Original. 368 pages, 5¾x8 inches. Neatly Bound in Extra Cloth. Price, $1.50, net. Delivered. Philadelphia: F. A. Davis Company.

The object of this book is to answer a question that is so often asked the family physician: "What shall I feed my baby?" The introductory chapters are devoted to the anatomy and physiology of digestion in infants, the latter especially in relation to chemistry and physiology of the different periods of infant life. The various milks, artificial foods, methods of feeding and the relation of certain foods to special physical conditions of the infant are discussed in all their phases. The author makes use largely of German authors in his quotations, and his book is a reflection of modern German practice, to a great extent. It contains a mass of practical and valuable information, in regard to diet for the mother, before and after the birth of her child, management of the breasts, preparation of foods, management of a few of the minor ailments in infants resulting from errors in diet or faults of digestion, etc. There is room for improvement in the literary style in several instances, but these minor faults are outweighed by the great practical value of the work.

A MANUAL OF PRACTICAL HYGIENE for Students, Physicians and Medical Officers. By Charles Harrington, M.D., Assistant Professor of Hygiene in the Medical School of Harvard University. Illustrated with 12 Plates and 105 Engravings. Cloth. Pp. 729. Price $4.25. Philadelphia and New York: Lea Brothers & Co. 1901.

The author handles his theme in general in a satisfactory way, and has in some respects carried his considerations a little beyond the limits of the ordinary work of this kind, that is, military and naval hygiene are treated, as well as quarantine laws, and tropical hygiene, a question which is now coming to be of some importance to medical sanitarians of the United States. He has, however, excluded some engineering questions, such as hospital arrangement, sewerage, etc., which are sometimes included in the larger text-books and has left out the usual chapters on bacteriology, which he thinks can be better studied in special works. The book is fairly accurate, though once in a while there is a slip, as for example when it says that up to 1892 the water-supply of Chicago was taken from a shore intake, a condition which has not existed for nearly thirty years before that time. Another point that impresses us as being open to criticism is the ignoring of a large part of American medical literature. A very few American journals only are quoted, while foreign authorities are quite adequately noticed. The book is well illustrated and will in the main meet the needs of the student satisfactorily. We hope that in future editions more attention will be given to one point we have mentioned, viz., the American contributions to the subject of sanitation and hygiene.

NURSING ETHICS: For Hospital and Private Use. By Isabel Hampton Robb, Graduate of the New York Training School for Nurses attached to Bellevue Hospital. Cloth. Pp. 273. Price $2.00. Cleveland, Ohio: J. B. Savage. 1901.

The author has already published a work on nursing which has been well received, and here gives in a general and also rather specialized way instructions as to personal conduct of nurses in their relations to the public, patients and the physician. Very little if anything is said to which we could take exception. Questions of personal habits, education, culture, the general care of the person, of the rooms, duties toward superiors and inferiors in the hospital, take up nearly two-thirds of the work. Only a few pages at the close are given to the relation of the nurse to the physician, a very important subject which might have been amplified. Still, the nurse who follows the advice here given will not come under the condemnation which has been uttered by various physicians, Dr. Malcolm Morris, for example, and others, and which, it must be said, often has a very good basis. The art of nursing is not all of the business, for there is something in natural aptitude, disposition, etc., and not every nurse can be satisfactory in all respects.

A MANUAL OF OBSTETRICAL TECHNIQUE as Applied to Private Practice. With a Chapter on Abortion, Premature Labor, and Curettage. By Joseph Brown Cooke, M.D., New York, Late Attending Physician St. Mary's Free Hospital for Children, Out-door Department. Cloth. Pp. 169. Price $1.25. Philadelphia and London: J. B. Lippincott Co. 1900.

The author carries out well the promise made in the preface, that book is written from the point of view of the private practitioner and that the hospital idea has been eliminated. It deals with technical obstetrics, considers the care of the patient from early pregnancy until the end of the puerperium, and has in addition a chapter of abnormalities, on obstetrical operations, including symphyseotomy, and a separate and very useful chapter on the douche. The closing chapters deal briefly with the obstetrician himself and the obstetrical nurse. Added to the work are history blanks on the card index system, instructions to pregnant women and to the nurse. The manual will be of benefit to the younger members of the profession, who so often have received no practical training in the art of obstetrics with the exception of a limited number of deliveries which they have witnessed in a well-equipped maternity.

INTERNATIONAL MEDICAL ANNUAL: A YEAR-BOOK OF TREATMENT AND PRACTITIONER'S INDEX. 1901. Nineteenth Year. Cloth. Pp. 682. Price, $3.00. New York: E. B. Treat & Co.

The 1901 volume of the International Medical Annual contains the usual judicious selections and keeps up well the reputation of the series. The names of the contributors, including a large number of the leading medical writers in this country as well as abroad, more especially England, are in their way a guarantee of the value of the work. Among the new contributors to this volume is an Italian, Professor Ruata, of the University of Perugia, Italy, the only continental European contributor: he furnishes the article on tuberculosis. The editor remarks, in the preface, that it may be of interest to the readers to know that this article is published as furnished by the author, in the English language.

A BOOK OF DETACHABLE DIET LISTS for Albuminuria, Anemia and Debility, Constipation, Diabetes, Diarrhea, Dyspepsia, Fevers, Gout or Uric Acid Diathesis, Obesity, Tuberculosis and a Sick-room Dietary. Compiled by Jerome B. Thomas, Jr., A.B., M.D., Instructor in Materia Medica, Long Island College Hospital. Second edition, revised. Cloth. Price, $1.25. Philadelphia: W. B. Saunders & Co. 1900.

This volume is a collection of diet lists for the sick and sick-room dietaries or recipes for preparing them. It has been before the public in an earlier edition, but the present one contains such improvements as have been suggested since. The idea of the book is to have the pages torn out and left as practical instructions for the sick-room, and it will doubtless be found useful by the practitioner. Both the diet prescribed and the methods of preparing it can be left with the nurse or at the patient's house.

THE CLIPPING-FILE for Classifying and Filing Newspaper Clippings, References to Books and Magazines, etc. Also a System of Classification, Consisting of Common Subjects and a Classified List of Topics. Price $1.00 per volume. The Clipping-File Company, Cleveland, Ohio.

The clipping-file consists of a case containing some ten envelopes with classification as to subjects, which are printed on

the outsides. For a limited number of clippings it may be found of some value. It is not, of course, necessary to follow the classification on the outside of the envelope, but this may be of convenience to some. Another edition is issued without this classification and may be adapted to anvone's ideas and uses.

A POCKET TEXT-BOOK OF CHEMISTRY AND PHYSICS. By Walton Martin, M.D., and William H. Rockwell, Jr., A.B., M.D., of the College of Physicians and Surgeons, New York. In one 12mo. volume of 366 pages, with 137 illustrations. Cloth, $1.50, net. Flexible red leather, $2.00, net. Philadelphia and New York: Lea Brothers & Co. 1900.

This work is another of Lea's series of pocket text-books and, while written especially for medical students, will be found of reference value to practitioners. In the section on physics a consideration of wireless telegraphy has been introduced, and the authors have given especial attention to details, notably in the consideration of organic chemistry, concerning those compounds which are "of medical interest not only medicinally, but in physiological chemistry."

AN INDEX OF SYMPTOMS AS A CLEW TO DIAGNOSIS. By Ralph Winnington Leftwich, M.D., Late Assistant-Physician to the East London Children's Hospital. Second Edition. Cloth. Pp. 267. Price, $2.00. New York: Wm. Wood & Co. 1901.

The first edition of this book was received with favor by the profession, and found to be a convenient reference work for the practitioner. The chapter on the methods of diagnosis, including the various urinary tests, though brief and elementary, adds to the value of the work.

Deaths and Obituaries.

James T. Stewart, M.D., University of Pennsylvania, Philadalphia, 1850, who had practiced in Peoria, Ill., for more than fifty years, died at his home in that city, April 12, aged 76. He was noted as a botanist, was one of the founders of the Peoria Scientific Association, and was a member of THE AMERICAN MEDICAL ASSOCIATION.

William H. Davies, M.D., Jefferson Medical College, Philadelphia, 1861, died suddenly from heart disease, at San Bernardino, Cal., April 10, aged 60. He had formerly practiced in Maquoketa, Iowa, but moved to California in 1897, on account of bronchial trouble, locating at Rialto.

John B. O. Landrum, M.D., who practiced for twenty-four years in Campobello, S. C., but who for the past few years had been devoting his attention to historical study and writing, died from blood poisoning, at his home in Campobello, April 13, after an illness of several weeks, aged 70.

Reuben B. Nisbet, M.D., University of Georgia, Augusta, 1850, of Eatonton, Ga., where he had practiced for half a century, a Confederate veteran, for many years chairman of the board of education, died at his home in Eatonton, April 10, after a short illness from pneumonia, aged 70.

Thomas Phillips Graham, M.D., Albany Medical College, Albany, N. Y., 1866, one of the first members of Council and of the Central Board of Education from the Thirty-sixth ward, Pittsburg, died at his home in that city after an illness of six months, on April 14, aged 61.

Frank Wayland Abbott, M.D., University of Buffalo, N. Y., 1866, died at his home, Buffalo, April 9, after a protracted illness, aged 59. He was oculist to the Buffalo General Hospital and the Charity Eye, Ear and Throat Hospital.

A. H. Robbins, M.D., Medical College of South Carolina, Charleston, who had practiced for many years in Northwest Township, Brunswick county, North Carolina, died at his home in Wilmington, April 13, aged 70.

John W. Charles, M.D., Washington University, St. Louis, 1865, died at Bethany Hospital, Kansas City, Kans., April 9, after an illness of two weeks. He was one of the oldest practicing physicians of Armourdale.

Cephas G. Adams, M.D., University of Vermont, Burlington, 1855, died at his residence in Portland, Me., April 13, as the result of injuries received in a carriage accident two years ago, aged 70.

J. Archer Watson, M.D., Trinity University, Toronto, 1885, was struck by a locomotive and killed instantly, while riding near Toronto, April 11. He was 45 years of age and had a wide practice.

Nelson D. Gaddy, M.D., Medical College of Ohio, Cincinnati, 1858, who practiced for nearly forty years in Weston, Ind., died at his home in Seymour, April 12, from heart disease, aged 72.

Frederick Koeberlin, M.D., who had practiced for more than forty years in Freeburg, Ill, died at his home in that city after a short illness, from heart disease, April 8, aged 69.

George W. Shilling, M.D., University of Pennsylvania, Philadelphia, 1875, of Sharon, Pa., died at Cambridge Springs, Pa., April 12, from kidney disease of long standing, aged 58.

Wyllis F. Wood, M.D., Albany Medical College, Albany, N. Y., 1874, died at his home in Rensselaer, N. Y., from lung disease after a long illness, April 11, aged 50.

Thomas A. O'Callaghan, M.D., McGill University, Montreal, 1880, died at his home in Worchester, Mass., April 13, after an illness of two years, aged 45.

Ellis Jennings, M.D., Medical College of Ohio, Cincinnati, 1862, died at his home in Dayton, Ohio, after an illness of several years, April 10, aged 67.

Harris S. Scruggs, M.D., Memphis Hospital Medical College, 1885, of Memphis, Tenn., was assassinated April 16, near his home, by persons unknown.

Peter O. Dillard, M.D., College of Physicians and Surgeons, Baltimore, 1893, died from consumption at his home in Martinsville, Va., April 9.

Abner E. Gore, M.D., University of Louisville, Ky., 1858, died at his home in Paris, Mo., from pneumonia, after an illness of one week, aged 78.

Merritt E. Williams, M.D., Louisville Medical College, 1875, died at his home in Antigo, Wis., April 14, from la grippe, aged 59.

George Kernahan, M.D., Rush Medical College, Chicago, 1880, died at his home in Chicago, from interstitial nephritis, April 17.

Henry Kemp Yeakley, M.D., Baltimore University School of Medicine, 1891, died at Fort Terry, Plum Island, March 27, aged 30.

Oliver H. Sullivan, M.D., Medical College of Indiana, Indianapolis, 1872, died at his home in Alexandria, Ind., April 12.

Louis Rademacher, M.D., Miami Medical College, Cincinnati, 1880, died at his home in Newport, Ky., April 7.

Arthur E. Herbert, M.D., Laval University, Quebec, 1882, died after a short illness at his home in Quebec, April 12.

Sylvanus C. Griswold, M.D., Missouri Medical College, St. Louis, 1860, died at his home in New Haven, Mo., April 6.

Miscellany.

Early Difficulty of Postmortems.—The *Journal de Med. de Paris* quotes the documents in a suit against a surgeon named Froment, in 1726, who was imprisoned because he had held an autopsy on the corpse of his own son and mounted the skeleton for preservation. The love of his art, he confessed, had overcome the tenderness of the parent. He was arrested on the complaint of his neighbors, but was soon released.

Modification of Murphy Button to Dispense with Sutures.—Jaboulay describes, in the *Archives Provinciales de Chirurgie*, ix, 10, a modification of the Murphy button. It consists in slitting each half of the button from the outer edge down to the shank. One lip of the intestine is worked into this slit, and then the other lip. The other part of the button is treated in the same way, and a little plate fits over the slit. The opening in the intestine can thus be extremely small.

Polyarthritis Anginosa.—This is the term proposed and advocated by Schurig in an article in the *Deutsche Militärärzt. Ztft.*, No. 3, for acute articular rheumatism, which he claims is usually preceded by tonsillitis. The throat and tonsils should have particular attention paid to them in all cases of articular rheumatism, and every simple tonsillitis should be vigorously treated to prevent the development of articular rheumatism. The regiments which suffer most from tonsillitis, he has noticed, are nearly always those that have most cases of articular rheumatism. The few exceptions demonstrate that the latter disease is influenced also by other factors.

Report of Special Commission on the Plague in San Francisco.

(Concluded from page 1132.)

From February 5 to February 16, thirteen dead Chinese were inspected as follows:

DEATH 1.—(Inspected February 5.) Chun Ah Chou, aged 44, actor; died this morning in Washington Street Theater; body well nourished; two or three dark bluish spots on legs—possible hemorrhages. On palpation of the neck, axillæ and groins, some enlargement of the lymphatic glands of the left groin was made out, though nothing corresponding to an outspoken bubo was visible. The inspecting commissioner advised a pathological and bacteriological examination in order to remove all doubt as to the nature of the case. The results proved the case to be one of infection with plague (*vide infra*, laboratory case 1).

DEATH 2.—(Inspected February 5) Wong Koong Chin, elderly Chinese male; died at 6 Waverly Place; history of dyspnea and cyanosis for a long time before death. There is marked edema of legs; no enlargement of lymphatic glands ascertainable on palpation. Death certificate signed by city physician as due to valvular disease of the heart. Case not regarded as suspicious and no pathological or bacteriological examination was insisted on.

DEATH 3.—(Inspected February 5) Lee Kee, middle-aged Chinaman, found dead at 917½ Stockton Street. This man had been visited by members of the Commission two nights before, the case having been reported to them as one suspected of being plague. Neither when seen during life nor on inspection after death was anything seen which pointed to infection with plague. No enlargement of lymphatic glands could be made out. A pathological and bacteriological examination was, however, deemed advisable for purposes of exclusion. The results as regards plague were negative (*vide infra*, laboratory case 2.) The assistant city physician attributed the death to intestinal obstruction.

DEATH 4.—(Inspected February 6) Fong Sha Song, coolie, aged 56, found dead in "hall of tranquility" at rear of 1111 Stockton St. No available history of condition *intra vitam;* body filthy; edema of legs; no enlarged lymphatic glands; no visible hemorrhages; pathological and bacteriological examination advised for purposes of exclusion. Results negative as regards plague (*vide infra*, laboratory case 4). Death attributed by city physician to interstitial nephritis.

DEATH 5.—(Inspected February 6) Lum Hong Yuen, died in room 15, third floor at 28 Ross Alley. Body found at Main Fook's undertaking establishment at 740 Pacific St. Through Mr. Wong Chung, the secretary of the Six Companies, a school teacher who knew deceased, stated that the man had been ill about three weeks, that he had been a cook and waiter in the Chinese Theater up to three weeks ago, when he quit work on account of "chancre and bubo," that since then he has been in his own room in Ross Alley, that four or five days before his death he was given medicine by a Chinese doctor, for a chill, that said medicine was too strong for the patient and that "his breathing stopped and he died."

On inspection of the body no evidence of "chancre" could be found; in the right inguino-femoral region a large mass of swollen conglomerated lymphatic glands could be felt. The swelling was so like similar swellings previously observed in cases of plague in Hongkong and in India that the case was regarded as almost certainly one of plague. Pathological and bacteriological examinations were made at once; the results proved correctness of the impression gained from inspection (*vide infra*, laboratory case 3).

DEATH 6.—(Inspected February 7) Wong Chi Lui, aged 45, cigar maker, who had worked at 418 Battery St. Found dead at 18½ (21½) Waverly Place. Through Mr. Wong Chung it was ascertained that the man had been ill for about two weeks, complaining of fever, loss of appetite and general uneasiness. He had had pains in the groins and lower abdomen to which region a Chinese doctor had applied honey and salve. No history of venereal disease. For three or four days prior to death, the man was unconscious. When chided by Mr. Wong Chung for not having reported the case earlier to the Six Companies, the brother of the deceased said he had not made a report because he had believed the patient would soon be well.

On inspection and palpation a large mass of swollen glands was discovered in the left inguino-femoral region. It seemed likely that the case was one of plague and the friends of the deceased were notified that an examination of the body would be made immediately. The pathological and bacteriological examination established the death as one due to infection with bacillus pestis (*vide infra*, laboratory case 5).

DEATH 7.—(Inspected Feb. 11) Tom Shom, male, aged 51; actor in Chinese theater; room above theater at 814 Washington St., near room of late Chun Ah Chou (See Death 1). This man was reported as ill to the Six Companies and was examined clinically on Friday, February 8, by Dr. Barker, who obtained the following history. The man had been acting in the theater about two weeks before, although it had been stated that he had not been very well for from six to seven months previously. On February 4 he became seriously ill with fever and delirium. There had been some vomiting. The urine as observed by the attendant was described as brandy colored. He had a Chinese doctor in attendance and his friends had not considered him ill enough to make a report to the Six Companies worth while. The man smoked about 50 cents worth of opium daily. On clinical examination the patient was found lying upon his back in bed with legs drawn up; he was in a state of semistupor. His pulse was 108, quick, rather full but of low tension. The skin was hot and dry; respiration 20 to the minute. The face had an anxious expression; the tongue was coated in the middle. There was no palpable enlargement of the glands of the neck or axillæ, but in the right groin several slightly enlarged glands could be distinctly felt, and the patient, though his mind was partially clouded, winced decidedly when either groin was palpated. It was evident that the glands were quite tender. In the absence of urethral discharge, chancre or evidence of local irritation in the lower extremities, the case was, on account of the local and general phenomena, regarded as one of plague. The skin was cleansed and a sterilized hypodermic needle introduced into the groin. A few drops of bloody fluid were withdrawn, presumably from one of the enlarged glands. It was difficult to be sure of this, however, as the patient could not be kept quiet while the needle was being inserted. No colonies of plague bacilli developed in the inoculated tube. The autopsy subsequently made indicated that the needle had failed to enter an enlarged gland.

The patient was seen on the following day when his conditions showed no change for the better. The pulse was 136 and feebler; the patient seemed in general weaker and an unfavorable prognosis was made. The patient's friends were told that an injection of Yersin's serum offered the best chances for recovery, though they were also told that not much could be hoped from any treatment in the stage of the disease in which the patient then was. The offer was refused. The man died on February 10, the next day.

The dead body was inspected on the morning of February 11. The body was in a state of firm rigor mortis, the limbs being strongly flexed. On breaking down the rigor mortis and palpating the glands in the groin, it was difficult to say positively that there was any enlargement of the lymphatic glands. In view of the enlargement distinctly made out during life and the clinical picture which had been observed, the death was believed to be due to plague and a pathological and bacteriological examination undertaken. The results indicated clearly the existence of infection with B. pestis (*vide infra*, laboratory case 6).

DEATH 8.—(Inspected February 11) Chung Moon Woo She, wife of Chung Toy Ding, living in a cellar at 27½ Waverly Place. She had been seen clinically by inspecting Commissioner on February 6 and also on February 9. When first seen clinically, it was learned that she had been ill for three or four days, complaining of aching pains in the ribs and other bones, headache and loss of appetite. She had no cough. Two days before she had felt very chilly. On examination she was found to have slight fever; pulse 100; tongue slightly coated; examination of thorax and abdomen negative; careful palpation of cervical, axillary, cubital, inguino-femoral and popliteal lymph glands revealed no enlargement or tenderness. When seen on February 9 the patient was found to have grown much worse; the pulse was 132 and quick; the temperature was higher, the tongue was dry, sordes were appearing upon the lips and the woman was semistupid and moaning in bed. The next day, February 10, the patient died and the body was inspected on the following morning. The house in which the body lay was filled with men, women and children, friends of the deceased, all of whom objected strenuously to any examination of the body whatever. It was insisted upon, however, and finally by promising that only one small cut would be made, permission for examination was granted. Amid an appalling outbreak of grief on the part of the friends, an incision was made in one groin and as the glands imbedded in the fat there showed no hemorrhages or enlargement, no further examination was made. It is to be regretted in this case where only one slight incision was allowable that the spleen was not bacteriologically examined as the case may have been one of general infection with B. pestis. At the time, however, in face of the strong protest made by the friends, it seemed wise, in order not to antagonize the Chinese too much and so perhaps interfere with progress of the whole investigation, not to go further. The body was surrounded by quicklime and sublimate sheet and burial was permitted by the Board of Health.

DEATH 9.—(Inspected February 12) Foong Ah Fong, female, aged 12, found dead at 747 Sacramento St.; room 12, fourth floor. This little girl had been observed clinically on February 6, the first day of systematic clinical inspection. She gave a history of having caught a cold, followed by a headache and lack of appetite. She had complained of no chill or vomiting. Her pulse was 84 and her temperature only slightly above normal. She did not look very ill; the tongue was slightly coated; there was no palpable enlargement of lymphatic glands. As the splenic dulness was only slightly increased, and the mother of the child stated that the patient had been ill for fully two weeks, plague was not suspected. The case was looked upon as possibly a mild case of typhoid, and instructions given to report to the Six Companies in case she got worse. She was not visited again during life. It was a surprise to hear of her death, and on inspecting the body, though no external signs of plague were visible, it was deemed advisable to make at least a bacteriological examination of the spleen. This was done, but under marked protest from the child's relatives. The result showed that the child was actually infected with B. pestis (*vide infra*, laboratory case 7).

DEATH 10.—(Inspected Tuesday, February 12) Ung Ah Buck, aged 45, found dead at Wing Hai's undertaking establishment on Sacramento St. This man had been seen alive and examined by Dr. Barker on the previous day, who diagnosed the case *intra vitam*, as one of cervical bubonic plague. When seen alive he was in a room upstairs in the rear of 921½ Dupont St., opposite St. Louis Alley. The man was sitting up, but looked extremely ill. His face was pale, cyanotic and anxious looking. His voice was very feeble, but his intelligence seemed almost unclouded, and he was able to carry on a conversation though with difficulty with the interpreter. The friends stated that he had at times wandered in his talk. He was under the care of Dr. Mather. The patient stated that he had been ill for two weeks. His neck had been swollen for one week and he regarded the condition as quinsy. With the aid of a tongue-depressor the throat was examined. The fauces were swollen and reddened, the swelling being very marked in the left side. The left palatine tonsil was much enlarged and showed on its surface a grayish-white patch the size of a dime. The reddening in the throat was general and there was less local injection than one ordinarily sees in diphtheria. The left side of the neck was brownish-yellow, having been painted over with a solution of iodin. On inspection and palpation marked bulging was found; this seemed to be due to enlargement of the cervical lymphatic glands. The

case was diagnosed as one of plague with cervical bubo. The man died next day and a complete autopsy was made by Dr. Flexner. The pathological examination showed typical lesions of plague and the bacteriological examination made by Dr. Novy demonstrated the presence of B. pestis (*vide infra*, laboratory case 8).

DEATH 11.—(Inspected February 14) Baby 7 days old, found in undertaker's establishment on Clay St., having died at 717 Sacramento St. Advised making of cover-slip and cultures from umbilical stump and from spleen; reported negative as regards B. pestis.

DEATH 12.—(Inspected February 15) Ow Ah Lane, male, aged 55, coolie, who had worked at San Jose Junction, died at Kwong Chow "hospital," February 14, at 6 a. m. He had been ill for from six to seven months. No enlargement of lymph glands. Advised bacteriological examination of spleen. Reported negative as regards B. pestis.

DEATH 13.—(Inspected February 16) A male body was found at Quong Fook's undertaking establishment, with slight swelling in the right groin. Pathological examination negative as regards plague. No bacteriological examination made.

It will be noticed that of the thirteen deaths, which came to our attention, occurring from February 5 to February 16 inclusive, six were undoubtedly due to infection with plague. A seventh (Death No. 8) may have been a case of plague which went unrecognized. The six undoubted deaths from plague occurred during the eight days from February 5 to February 12 inclusive. During the days February 13 to February 16 inclusive, no new cases of plague or deaths therefrom were encountered.

Two of the deaths from plague occurred in the Chinese Theater on Washington Street. The other four cases occurred singly in different parts of Chinatown.

The study of cases during life and the inspection of bodies after death proves that it is often difficult and under certain circumstances impossible to make a diagnosis of plague even postmortem without bacteriological examination. In outspoken bubonic cases there will be but little if any difficulty in diagnosis, either intra vitam or postmortem provided the observer has had sufficient experience with the disease, but in the absence of primary buboes, the unskilled observer will miss practically every case and even the practitioner who has had much experience with plague may be deceived. Your Commissioners feel sure from experience with plague in Hongkong, India and San Francisco that once it is established that plague exists among the Asiatics of a town, every Asiatic who has fever should be suspected as a case of infection with plague until the disease is proved to be other than plague and every dead body should be treated as a plague cadaver until bacteriological examination of glands, lungs and spleen (including animal inoculation) has proved the absence from the body of the B. pestis. Only by such caution will it be possible to avoid missing actual plague cases.

In the following table are given the deaths per month occurring from all cases among the Chinese during the past four years as recorded by the City Board of Health. As data regarding the exact population of Chinatown at different times are not obtainable it is difficult to institute comparisons of the mortality among the Chinese with that among whites. It is obvious, however, that at no time during the past four years has the mortality rate among the Chinese increased to such an extent as to, in itself, cause alarm.

MORTALITY AMONG CHINESE OF SAN FRANCISCO, 1897-1901.

Months.	1897	1898	1899	1900	1901
January	37	35	46	64	45
February	46	36	39	48	
March	38	46	37	47	
April	35	41	33	30	
May	27	34	36	42	
June	30	21	46	25	
July	39	25	34	38	
August	35	47	43	19	
September	45	27	35	27	
October	36	53	44	32	
November	39	66	37	34	
December	23	46	48	32	
Total	430	477	478	438	

THE PATHOLOGICAL ANATOMY OF THE CASES OF BUBONIC PLAGUE MET WITH IN SAN FRANCISCO.

1. Human cases.
2. Experimental inoculations.

In the study of the pathology of the cases of plague met with among the Chinese in San Francisco, a number of disadvantageous circumstances were contended with. In the first place, owing to the peculiar prejudices of this people, prejudices born especially of their religious beliefs and practices, permission for postmortem examination is given with great reluctance. The opposition to all mutilation of the bodies of the dead is so great that consent for autopsies was obtained only after assurances that the examinations would be limited strictly to the actual necessities for the establishment of the diagnosis of the disease.

In the next place, there is no public mortuary in San Francisco to which the dead bodies were or could be carried. Such examinations as were made were conducted in the narrow limits of a dimly-lighted alcove in an undertaker's shop or in the even worse habitations where the dead were found.

Under these circumstances, the postmortm examinations left something to be desired on the score of completeness, although in every instance the important question whether death was caused by plague was answered definitely.

The majority of the dead did not exhibit well-marked buboes. Careful palpation usually was required in order to discover swellings and edema of the groin. In all cases in which inguinal buboes were suspected or discovered, incision was performed and the diseased glands and periglandular tissue, if present, removed.

With one exception (Case 8) complete autopsies were not made. In all cases, however, the spleen was exposed and examined and parts removed. The tissues removed at autopsy were examined in three different ways: 1. Cultures upon agar agar and cover slips were made at once after removal. 2. The tissues were taken to the laboratory where additional cultures and cover-slips were prepared and examined. 3. Guinea-pigs were inoculated with portions of the tissues. Finally, portions of the tissue were placed in alcohol for future study.

HUMAN CASES.

CASE 1.—Chom Ah Chou, autopsy February 5, 8 p. m. Examination was made in the presence of one of us (Flexner) by Dr. Kellogg. The examination consisted in exposing and removing the inguinal and femoral glands on both sides. Incisions were made deep into the subcutaneous tissue, extending from Poupart's ligament about one-third the length of the thigh. The tissues on the left side were swollen and edematous: the edema was sero-hemorrhagic in character and the lymphatic glands were hemorrhagic and greatly swollen. On the right side, the edema was less marked and the glands, while distinctly enlarged and reddened, were less altered than those of the left side. Sections of these glands showed them to be uniformly hemorrhagic and swollen and to contain frequently necroses visible to the naked eye.

The spleen was fully twice the normal size. It was softer than normal, the capsule was wrinkled and the color deepened.

The further examination of these tissues was made after removal to the laboratory and participated in by Drs. Barker and Novy. The examination consisted in: 1. Study of cover-slips stained in anilin dyes and treated by Gram's method. 2. Preparation of cultures upon agar agar separately by each member of the Commission. 3. Inoculation of guinea-pigs with portion of tissue from the glands and spleen. 4. Preservation of tissues in alcohol for future study.

The examination of the cover-slips from the glands, periglandular tissue, and spleen showed large numbers of bacilli decolorizing by Gram's method and presenting the morphology of the B. pestis.

CASE 2.—Lee Kee, autopsy Feb. 5, 9 p. m., in the presence of Dr. Flexner, performed by Dr. Kellogg; no evidence of plague.

CASE 3.—February 6, Lum Hong Yuen, autopsy made in Main Fook's undertaker shop, Drs. Kellogg, Novy and Flexner present. Upon incising the right groin from Poupart's ligament to the beginning of the middle third of the thigh, serohemorrhagic periglandular edema and uniformly enlarged and reddened glands were found. The amount of fluid was considerable; although there was enlargement of all the glands, some of them reached to the size of a horse-chestnut. On section these were of deep red color and soft consistence. Necroses were present.

The spleen was enlarged to fully double the normal size; it was softened and of a deep bluish-red color.

Cultures and cover-slips were made at once by Dr. Novy and the excised tissues taken at once to the laboratory where additional cultures were made, cover-slips examined and animals inoculated.

The cover-slips showed large numbers of bacilli, having the morphology and staining properties of B. pestis.

CASE 4.—Feb. 6, Fong Sha Shong, autopsy by Dr. Kellogg in the presence of Drs. Novy and Flexner. No evidence of plague.

CASE 5.—Wong Chi Lui, February 7, autopsy by Dr. Barker, 6 p. m., Drs. Novy and Kellogg present.

On inspection, there was a swelling in the left inguino-femoral region, which on incision revealed enlarged glands about the saphenous opening and in the groin. The largest gland had the size of an English walnut and was of a dark reddish-brown color. It was soft and juicy in consistence and mottled with hemorrhages and grayish-white patches of necrosis. The less swollen glands were markedly injected and contained hemorrhages. Periglandular tissue was very edematous, the fluid running freely from the incision. The spleen was about twice the normal size; soft and friable.

Cultures were made at once by Dr. Novy and cover-slips about one hour later at the laboratory, where at the same time animals were inoculated with portions of the tissue. The cover-slips from the spleen and the glands showed bacilli, presenting all the properties of B. pestis.

CASE 6.—Tom Shom, February 10, autopsy by Dr. Kellogg, Drs. Barker and Novy being present.

There was a slight swelling in the right inguino-femoral region which on incision revealed slightly edematous subcutaneous tissue, with slight enlargement of the glands. The largest gland was the size of a filbert, and its surface was dark and hemorrhagic. On section, it presented distinct hemorrhages; other glands were swollen, soft, juicy and hemorrhagic. The spleen was enlarged, soft and friable. The examination of the groin showed that the hypodermic puncture made for the withdrawal of fluid for diagnostic purposes during life had failed to enter a lymph gland.

Cover-slips from the spleen and glands showed large numbers of bacilli having the characteristic properties of the B. pestis.

CASE 7.—Eoong Ah Fong, Feb. 12, autopsy by Dr. Flexner, Dr. Barker Present. The spleen only was examined; the organ was en-

larged to about twice the normal size and was diminished in consistence. Cover-slips showed a very small number of bacilli of the size of B. pestis, although the characteristic polar staining was not observed. Cultures were made and a portion of the spleen was introduced subcutaneously into the guinea-pig.

CASE 8.—Ung Ah Buck, autopsy Feb. 12, at noon at the undertaking shop of Wing Hai, by Dr. Flexner, Drs. Novy, Barker, Kellogg and Wilson being present. The left side of the face and neck presented a marked diffuse swelling, extending from the angle of the jaw backward to the sterno-cleido-mastoid muscle and below, almost reaching the clavicle.

On incising this region the parotid gland was first reached; this organ presented a normal appearance. After dissecting away the parotid gland a group of greatly enlarged deep glands surrounding the carotid artery and jugular vein came into view. The perglandular tissue was infiltrated with bloody fluid and presented a sodden appearance. The enlarged glands and portions of the surrounding tissue were excised; the former were found to be swollen—several reaching the size of an English walnut—and to be wholly altered in appearance and consistence. In color they were deep purplish and on incision a hemorrhagic fluid exuded. Opaque points of necrosis were also present.

The general subcutaneous fat was well developed; there was no general edema. The peritoneum appeared smooth and glistning; there was no excess of fluid in the abdominal cavity and the abdominal glands were not noticeably swollen. The spleen was enlarged to fully twice its normal size; it presented a purplish color and its consistence was diminished. The pleural cavities were dry. The lungs retracted moderately upon removal of the sternum. The lower lobes of the lungs were congested, but no consolidation was made out; no other abnormality was observed in the body.

The organs and tissues removed at this autopsy, consisting of the enlarged cervical glands and spleen, were taken to the laboratory where cover-slips, cultures and animal inoculations were made.

The cover-slips from the spleen showed large numbers of a bacillus having the morphology and staining properties of the B. pestis. The cover-slips from the glands differed in their appearance. In some instances there were present large numbers of bacilli similar to those in the spleen, together with a few diplococci or short chains of cocci. Other cover-slips showed, besides the organisms mentioned, a bacillus having the morphology of the B. diphtheriæ.

EXPERIMENTAL INOCULATIONS.

The animals used for experimental inoculations were half-grown and grown guinea-pigs. In order to guard against accidental infection of the locality, the animals were placed in glass jars, which in turn were placed in large crocks, the latter having been covered with wire-netting covers upon which the earthenware covers were placed. When an animal succumbed to the inoculation it was carefully removed from the jar and immersed for some time in 1 to 1000 sublimate solution. The jar itself was filled with a similar sublimate solution and the two left in contact for several days.

After subjecting the animals to autopsy, they were placed in the steamer and thoroughly steamed, after which the body was incinerated. Such portions of the tissue as were preserved for microscopical study were placed at once in 95 per cent. alcohol.

Inoculations were made subcutaneously with bits of tissue from the tissue from the human cases and pure cultures of bacilli obtained from these sources. The usual procedure was to inoculate at least two animals from each human case; one with portions of the spleen and another with portions of the lymph gland. The cultures used were derived indifferently from the spleen and from the glands.

The inoculated animals can be separated into groups, depending upon the results of the inoculation. These results in turn depended upon the virulence of the material—tissue or culture—inoculated, upon which also depended the duration of life following inoculation.

It is *important* to state that characteristic lesions were obtained from inoculated material derived from every case in which bacilli were found in cover-slips, including Case 7 in which very small numbers of bacilli were detected in the spleen.

Types of Infection.—The animals inoculated early in the course of the investigations died at periods varying from forty hours to eight days. Those inoculated later, and one or two inoculated with cultures early in the studies, but which had not succumbed, were etherized at the close of the work and subjected to postmortem examination. According to the period of survival and virulence of the inoculated material, the appearances observed denoted: 1, bacteremia without microscopical localization in the organs, and 2, focal, nodular, localizations in the internal organs. In all cases marked local lesions at the site of inoculation and in the adjoining tissues occurred.

Local Lesion.—At the point of inoculation, the tissues—skin, subcutaneous tissue and sometimes muscles—were infiltrated with pus cells and presented a yellowish focus of necrosis. From this area as a center, the subcutaneous tissue, sometimes of one side, but frequently of both sides, were occupied by gelatinous hemorrhagic infiltration.

The lymphatic glands of the inguinal and axillary regions were distinctly enlarged even in the acute cases. In those animals which died after a longer period or were killed from six to seven days after inoculation, the regional lymphatic glands were much enlarged, hemorrhagic and even necrotic. The inguinal glands were, as a rule, more swollen than the axillary.

Cover-slip preparations from the local lesion—necrotic area, subcutaneous edema, swollen lymph glands—showed large numbers of bacilli, having the characteristic morphology, staining and reaction to Gram's method of the B. pestis. Cultures from these sources gave positive results.

In one animal in which the inoculation was made with a culture, the animal being etherized on the third day, there was slight local reaction only, no involvement of the regional lymph glands and no visible lesions in the internal organs having been observed. A small number of characteristic bacilli were found in cover-slips made from the site of inoculation.

The Spleen and Liver.—In the instances of rapid death (bacteremia) the spleen was moderately large, its color was deepened, its consistence decreased, but no focal lesions were visible to the naked eye. Cover-slips and cultures showed numerous bacilli agreeing in characteristics with those of B. pestis.

In this class of cases, the other organs failed to show focal lesions. The lungs appeared mottled only and a few small necroses existed in the liver; numbers of bacilli were contained in all the viscera and in the heart's blood.

The focal lesions in the spleen consist of grayish-white nodules, larger than a millet seed in size, covering the surface (within the capsule) and occupying the substance of the organ; when the nodules are numerous, as e. g., in animals succumbing from the sixth to the eighth day, or after etherization at that period, when there has been a marked local reaction, the spleen is greatly enlarged, perhaps five to six times its normal size and its color is pale. Cover-slips and cultures show a very large number of characteristic bacilli if the animal has died spontaneously, while if killed the number of bacilli upon cover-slips and cultures is far less.

The liver invariably showed lesions when death had been delayed a few days. The common ones were focal necroses of varying size; these were yellow in color and in size ranged from that of a pin's point to linear and wedge-shaped areas 3 to 4 mm. in length. Only rarely did whitish nodules similar to but smaller than those occurring in the spleen occur. The best example of nodular lesions in the liver was observed in an animal inoculated with a culture derived from Case No. 1, the guinea-pig having been etherized on the eighth day after inoculation.

The Lungs.—The lungs presented a variety of appearances, only one of which was characteristic. Some times they showed no macroscopical lesions; not uncommonly, they were mottled and presented small ecchymoses beneath the pleura; rarely they contained scattered whitish nodules resembling those of the spleen, except that they were smaller and surrounded with a zone of recent hemorrhage. No effusion into the pleuræ were noted.

Subserous Hemorrhages.—These were common, especially in the peritoneum, where they occurred beneath and within the serosa of the large intestine, and in the pleura covering the lungs. They were usually small in size, although at times through confluence they reached larger dimensions. They did not give rise to an exudate or effusion into the serous cavities.

The other organs, except the adrenal glands, showed no especial changes to the naked eye. The adrenals were uniformly congested and often very dark in color and hemorrhagic.

The central nervous system was not examined.

BACTERIOLOGICAL EXAMINATIONS.

CASE 1.—Chun Ah Chou, 814 Washington St., autopsy February 5. The spleen and left femoral glands were examined. These organs were found to contain enormous numbers of bacilli, having the morphological and tinctorial properties of bacillus pestis; thus the short thick oval rods gave a bi-polar stain with Loeffler's methylene blue or with carbolic thionin and were decolorized by Gram's method. Their pathogenicity was determined by inoculation of portions of the spleen and of a pure culture, subcutaneously, into guinea-pigs.

Agar streaks made from the perfectly fresh organs showed many small white, moist, isolated colonies, having all the appearance of those of bacillus pestis. This was further confirmed by microscopic examination of living and stained preparations of such cultures. A few rapid-growing colonies due to other forms of bacteria were present. Subcultures were made in glucose gelatin, bouillon, agar, salt agar and milk. On agar in Petri dishes in twenty-four to forty-eight hours in the incubator, small white or grayish, moist colonies developed. These had a finely granular center with a smooth, sharply defined border.

The stab culture in glucose gelatin developed a slight growth along the line of inoculation. On the surface, the growth spread slightly, was grayish, moist in appearance and had a slightly wavy, raised border. No gas was formed.

In bouillon, in twenty-four hours, a diffuse cloudiness was produced. The sediment was very slight, scarcely appreciable. Subsequently, a faint stringy deposit formed. The surface remained perfectly clear with a trace of a ring or collarette.

The streak cultures on nutrient agar presented a moderate grayish-white, moist growth which, when touched with a platinum wire, could be drawn out into strings.

On 5 per cent. salt agar, the growth is very slight, scarcely visible, and shows the peculiar roundish or pyriform involution forms of the pest bacillus.

In milk the organism grows without producing any visible change in the medium.

The absence of gas-production and of coagulation of milk, together with the macroscopic and microscopic characteristics, agreed fully with the characters of bacillus pestis. The effects on animals have been described in a preceeding part of the report.

Guinea-pig No. 1 was inoculated under the skin with a portion of the spleen from the above case. It died in thirty-six to forty hours. Cultures on agar made from the spleen and heart blood gave almost pure growths of the pest bacillus. Direct examination of the organs showed enormous numbers of typical plague bacilli.

Guinea-pig No. 2 was inoculated subcutaneously with a pure culture obtained from the gland of the above case. The animal died in three days. Plague bacilli were very numerous in the spleen and inguinal glands and were also present in the heart's blood.

CASE 3.—Lum Hong Huen, 28 Ross Alley, autopsy February 6. Smear preparations from the spleen showed large numbers of short thick rods, chiefly single; some oval or roundish-forms were also present. The organisms stained readily with Loeffler's methylene blue or with carbolic thionin. In the latter case the bi-polar staining was excellent. The organisms were completely decolorized by Gram. Cover-glass preparations from the gland likewise showed very numerous bacilli, occurring singly, taking the bi-polar stain, but not that of Gram. Agar cultures were made at the time of the autopsy in the undertaker's shop of Main Fook. The cultural and morphological characteristics were the same as those observed in Case 1.

Guinea-pig No. 3 received, subcutaneously, a portion of the spleen from the above case, and died in 5½ days. On autopsy the spleen was found markedly enlarged, full of white nodules which were also present in the liver and in the lungs. Cover-glass preparations from the spleen showed enormous numbers of bacilli, having all the characteristics of bacillus pestis. Agar slants were inoculated with the heart's blood and spleen of this animal. The former yielded a slightly contaminated growth but the culture from the latter was pure.

CASE 5.—Wong Chi Lui, 21½ Waverly Place, autopsy February 7. Streak preparations from the spleen showed very numerous pest bacilli apparently in pure culture; the predominating form was the short thick rod, although some oval or roundish forms were present. Loeffler's methylene blue and carbolic thionin stained the bacilli readily, demonstrating the characteristic bi-polar form. The organisms were completely decolorized by Gram's method. Similar preparations made from one of the left femoral glands show fewer organisms but these in form, size and staining reactions are identical with those found in the spleen. Cultures made on agar developed very slowly; on subsequent transplantation, however, the growth was more rapid, more abundant and typical of that of bacillus pestis.

Guinea-pig No. 4 was inoculated subcutaneously with a portion of the gland from the above case. Death resulted in 3½ days. Bacilli were numerous in the spleen and corresponded in characteristics to those of the plague bacilli.

Guinea-pig No. 5 was inoculated subcutaneously with a portion of the spleen; it was found dead 3½ days later. Numerous plague bacilli were found in the spleen, heart's blood and glands. Agar streaks from the heart's blood gave numerous small colonies of pest bacilli with a few larger colonies due to foreign organisms. The spleen gave numerous isolated small moist colonies, apparently a perfectly pure culture of the plague bacillus. Agar streak plates were made at the same time and gave in twenty-four hours numerous minute colonies.

Guinea-pig No. 6: A portion of the spleen from this case was introduced into the peritoneal cavity. Death resulted in 4½ days. Pest bacilli were abundant in the internal organs and in the glands. Agar streaks from the heart's blood gave a very limited growth, while those from the spleen were scarcely visible. In this and several other instances, difficulty was experienced in starting the growth of the organism directly from the tissues. Once started, however, with subsequent transplantations, better results were obtained.

Guinea-pig No. 7 was inoculated subcutaneously with a loopful of pure culture obtained from guinea-pig No. 5. It died in 2½ days. Autopsy revealed a hemorrhagic edema and cover-glass preparations of this showed pest bacilli mixed with numerous minute diplococci and streptococci. The spleen was large and soft, contained nodules and, on staining cover-slips therefrom, enormous numbers of typical plague bacilli, apparently perfectly pure, were found. No diplococci were present.

CASE 6.—Tom Shom, 814 Washington St., autopsy February 11. During life some fluid was aspirated by means of a sterile syringe, from the swelling in the right femoral region, and transferred to nutrient agar. Blood was also drawn from the lobe of the ear and planted on agar. Stained preparations made from these specimens failed to demonstrate the presence of any organism. Cultures developed pyogenic cocci, but failed to give any indication of pest bacilli. On autopsy the femoral glands, though characteristic of plague, were found not markedly enlarged. It was evident that the aspirating needle when introduced had missed the gland proper, and the failure to isolate the pest bacillus during life in this case can thus be explained. It should be noted that the periglandular tissue was but very slightly involved. Streak preparations made from the hemorrhagic gland showed relatively few typical plague bacilli. A long thick bacillus was present in small numbers. Gram's stain was negative. Streak preparations from the spleen showed the pest bacillus to be present in large numbers and apparently pure. The organisms occurred singly, gave the bi-polar stain and were decolorized by Gram.

Guinea-pig No. 6 was inoculated subcutaneously with a portion of the spleen from this case. Six and a half days later, though healthy in appearance, it was killed. A circumscribed caseous local lesion was found: there was a slight glandular enlargement on the same side. The spleen was slightly enlarged and showed white nodules; pest bacilli having the short-rod and oval form were present in small numbers.

CASE 7.—Fong Ah Fong, 747 Sacramento St., autopsy Feb. 12. Streak preparations from the spleen revealed the presence of pest bacilli, although these were not very abundant; indeed, they were difficult to find in the cover-slips. Typical bi-polar staining rods and oval roundish forms were, however, found. Gram's stain was negative.

Streak cultures were made with the fresh spleen on agar slants and at the same time agar plates were made. The agar streaks failed to give an appreciable growth, but on the plate a colony was found which corresponded to that of the plague bacillus. On microscopic examination it was observed to consist of small, short, oval, non-motile rods, which decolorized by Gram. The colony transplanted to agar gave a typical growth of pest bacilli, and this culture was used to inoculate guinea-pig No. 10.

Guinea-pig No. 9 received a portion of the spleen of Fong Ah Fong, subcutaneously. It died in 4½ days. The spleen contained enormous numbers of pest bacilli which stained in the usual bi-polar manner and were decolorized by Gram. The heart's blood likewise contained the organism. Cultures were made on agar from the spleen and heart's blood of this animal; both gave numerous small moist colonies of bacillus pestis.

Guinea-pig No. 10 was inoculated subcutaneously with the agar culture mentioned above. It was killed 2½ days later. The spleen showed only a few but characteristic pest bacilli; under the skin there was but slight local change and a few typical bacilli were found.

CASE 8.—Ung Ah Buck, St. Louis Alley, autopsy February 12. Cover-slip preparations from the cervical lymph glands showed the presence of several distinct organisms. The short, thick oval forms of the pest bacillus were present in small numbers; with them was associated a large thick bacillus; there were also bacilli present resembling the bacillus diphtheriæ and a diplococcus closely resembling that of Fränkel. The pest bacilli gave the usual bi-polar stain with methylene blue and with carbolic thionin. Specimens stained by Gram's method showed deeply stained diplococci, the other forms being decolorized. Smear preparations from the spleen showed many organisms resembling the bacillus pestis morphologically.

Agar streaks from the fresh spleen gave a number of discrete moist colonies which consisted of large oval non-motile bacilli, occurring singly and only occasionally in pairs; the streak cultures from the cervical gland also gave numerous isolated colonies. In both cases the cultures obtained were apparently perfectly pure and agreed in every respect with those of plague bacilli. The other bacteria seen in cover-slips did not grow. Agar plates yielded the same result.

Guinea-pig No. 11 was inoculated subcutaneously with a small portion of the spleen from the above case. In about three days the animal was very sick and was finally killed 5½ days after inoculation. Bacillus pestis was found in the spleen and to a less extent in the blood.

The bacteriological examination of the foregoing six cases has therefore demonstrated the presence of the bacillus pestis in each.

(Signed.) SIMON FLEXNER, M.D.
F. G. NOVY, M.D.,
LEWELLYS F. BARKER, M.D.

San Francisco, Cal., Feb. 26, 1901.

Societies.

COMING MEETINGS.

American Medical Association, St. Paul, Minn., June 4-7.
American Association of Genito-Urinary Surgeons, Old Point Comfort, April 30, 1901.
Association of American Physicians, Washington, D. C., April 30, 1901.
American Gastro-Enterological Association, Washington, D. C. May 1, 1901.
Kansas Medical Society, Pittsburg, May 1-3, 1901.
American Surgical Association, Baltimore, Md., May 7-9, 1901.
American Therapeutic Society, Washington, D. C., May 7-9, 1901
Nebraska State Medical Society, Lincoln, May 7-9, 1901.
Oklahoma Territory Medical Association, Oklahoma City, May 8, 1901.
Mississippi State Medical Association, Jackson, May 8, 1901.
Washington State Medical Society, Seattle, May 8-9, 1901.
Ohio State Medical Society, Cincinnati, May 8-10, 1901.
Arkansas Medical Society, Hot Springs, May 14-16, 1901.
Medical Association of Montana, Great Falls, May 15-16, 1901.
Michigan State Medical Society, Battle Creek, May 15-16, 1901.
Iowa State Medical Society, Davenport, May 15, 1901.
Indiana State Medical Society, South Bend, May 15-17, 1901.
New Hampshire Medical Society, Concord, May 16-17, 1901.
Medical Association of Missouri, Jefferson City, May 21-23, 1901.
Illinois State Medical Society, Peoria, May 21-23, 1901.
Medical Society of North Carolina, Durham, May 21-23, 1901.
Connecticut Medical Society, Hartford, May 22-23, 1901.
Kentucky State Medical Society, Louisville, May 22-24, 1901.
Medical Society of West Virginia, Grafton, May 22-24, 1901.
American Laryngological, Rhinological and Otological Society, New York City, May 23-25, 1901.
American Pediatric Society, Niagara Falls, N. Y., May 28, 1901.
American Gynecological Association, Chicago, May 28, 1901.
American Climatological Association, Niagara Falls, N. Y., May 30, 1901.
American Association of Military Surgeons of the United States, St. Paul, May 30, 31, June 1, 1901.
American Academy of Medicine, St. Paul, Minn., June 1-3.
National Con. State Medical Examiners and Licensing Boards, St. Paul, Minn., June 3.
Association of American Medical Colleges, St. Paul, June 3.
American Medical Editors' Association, St. Paul, June 3.
Minnesota State Medical Society, St. Paul, June 3.

American Proctological Association, St. Paul, Minn., June 4-5.
American Dermatological Association, Chicago, June 4-6.
Rhode Island Medical Society, Providence, June 6.
International Association of Railway Surgeons, Milwaukee, June 10-12.
Medical Society of Delaware, Lewes, June 11.
American Medico-Psychological Association, Milwaukee, Wis., June 11-14.
Maine Medical Association, Portland, June 12-14.
Massachusetts Medical Society, Boston, June 12.
Colorado State Medical Society, Denver, June 18.
American Orthopedic Association, Niagara Falls, June 18-20.
Medical Society of New Jersey, Allenhurst, June 25-27.
Wisconsin State Medical Society, Waukesha, June 26.

Roentgen Society of the United States.—The next meeting of this Society will be held at the University of Buffalo, N. Y., September 10 and 11.

Southwestern Medical Association of Kentucky.—The thirteenth annual meeting of this organization will be held in Paducah, May 14 and 15.

Onachita County (Ark.) Medical Association.—This Association was recently organized at Camden, and elected Dr. James T. Henry, Eagle Mills, president.

Southern Railway Surgeons.—The sixth annual meeting of the Surgeons of the Southern Railway will be held at Mobile, Ala., May 7, 8, and 9. Dr. Samuel R. Miller, Knoxville, Tenn., will preside.

Southeast Missouri Medical Association.—The twenty-sixth annual meeting of this Association will be held at Charleston, May 7, 8 and 9, under the presidency of Dr. Moses Rosenthal, Kennett.

Bradford County (Pa.) Medical Society.—At the meeting of this Society, in Burlington, April 16, delegates were selected to the State Medical Society and to the AMERICAN MEDICAL ASSOCIATION.

Cumberland County (Pa.) Medical Society.—At the meeting of this Society, at Mechanicsburg, April 10, delegates to the State Medical Society and to the AMERICAN MEDICAL ASSOCIATION were elected.

St. Louis (Mo.) District Medical Society.—The fifth semi-annual meeting of this Society occurred April 11, at St. Louis. Dr. Frank J. Tainter, Warrenton, was re-elected president, and Dr. John C. Murphy, St. Louis, elected permanent secretary. The next meeting will be held in St. Charles.

Pike County (Ohio) Medical Society.—The annual meeting of this Society was held at Flat, April 8, and the following officers elected: Dr. E. M. Dixon, Flat, president; Dr. J. S. Wiseman, Beaver, vice-president; Dr. Charles H. Willson, Idaho, secretary, and Dr. Orrin C. Andre, Waverly, treasurer.

Northwestern Wisconsin Medical Association.—At the annual meeting of this Society, held at Stevens Point, April 9, the following officers were re-elected: Dr. Carl Von Neupert, Jr., Stevens Point, president; Dr. Viola M. French, Neillsville, vice president, and Dr. Daniel R. Freeman, Colby, secretary and treasurer.

DeWitt County (Ill.) Medical Society.—This Society met at Clinton, April 9, for its annual session, and elected the following officers: Dr. Albert E. Campbell, Clinton, president; Dr. Curtis C. McMackin, Wapella, vice-president, and Dr. John H. Tyler, Clinton, secretary and treasurer.

Hill County (Texas) Medical and Surgical Association.—At its meeting in Hillsboro, April 11, this Association elected the following officers: Dr. Edwin L. Sessions, Hillsboro, president; Dr. George W. Benton, Woodbury, vice-president; Dr. Allen J. Gilbert, Hillsboro, secretary, and Dr. Benjamin F. Smith, Hillsboro, treasurer.

Marshall County (Ala.) Medical Society.—At the annual meeting of this Society, held at Guntersville, Dr. Thaddeus A. Casey, Albertville, was elected president; Dr. Peter M. Baker, Snead, vice-president; Dr. Miles B. Stephens, Whitesville, secretary and treasurer, and Dr. P. B. Lusk, Guntersville, county health officer.

Hampden District (Mass.) Medical Society.—This Society held its annual meeting at Springfield, April 16, elected delegates to the AMERICAN MEDICAL ASSOCIATION, and also the following officers: Dr. Lawton S. Brooks, Springfield, president; Dr. Stephen A. Mahoney, Holyoke, vice-president, and Dr. Harry C. Martin, Springfield, secretary and treasurer.

Shelby County (Ind.) Medical Society.—This Society has elected the following officers: Dr. Morris Drake, Shelbyville, president; Dr. Henry E. Phares, Morristown, vice-president; Dr. Frank Campbell, Shelbyville, secretary, and Dr. Joseph Bowlby, Shelbyville, treasurer. Delegates were also elected to the state society and to the AMERICAN MEDICAL ASSOCIATION.

Fairfield County (Conn.) Medical Association.—The one hundred and ninth annual meeting of this Society was held at Bridgeport, April 8, and the following officers were elected: Dr. Franklin P. Clark, Danbury, president; Dr. Nathaniel E. Wordin, Bridgeport, vice-president, and Dr. J. Murray Johnson, Bridgeport, reporter. Delegates to the AMERICAN MEDICAL ASSOCIATION were also chosen.

Medical Association of Dutchess County (N. Y.).—This branch of the New York State Medical Association was organized at Poughkeepsie, April 11, and elected the following officers: Dr. Irving D. LeRoy, Pleasant Valley, president; Dr. Edwin Barnes, Pleasant Plains, vice-president; Dr. John W. Atwood, Fishkill-on-Hudson, secretary, and Dr. Monroe T. Pultz, Stanfordville, treasurer.

Windham County (Conn.) Medical Association.—The one hundred and eighth annual meeting of this Association was held April 11, at Putnam. Dr. Laura H. Hills, Willimantic, was elected president; Dr. Frank H. Coops, Danielson, vice-president, and Dr. James L. Gardner, Central Village, clerk and treasurer. The Association will hold its next annual meeting at Willimantic, in April, 1902.

Missouri State Medical Association.—The preliminary program, just issued, for this Association's meeting at Jefferson City, May 21, 22 and 23, indicates that the sessions will be interesting and profitable. The meetings will be held in Representative Hall, the headquarters will be at the Madison Hotel, and Dr. Robert E. Young is chairman of the committee of arrangements.

Plymouth County (Mass.) Medical Society.—This Society met at Brockton, April 17, and elected the following officers: Dr. Alfred A. Mackeen, Whitman, president; Dr. Jesse H. Averill, Campello, vice-president; Dr. Frank H. Burnett, Brockton, secretary, treasurer and reporter, and Dr. Charles E. Lovell, Whitman, librarian. Delegates to the AMERICAN MEDICAL ASSOCIATION were also chosen.

Lebanon County (Pa.) Medical Society.—At the annual meeting of this Society, April 10, the following officers were elected: Dr. John J. Light, Schaefferstown, president; Drs. William R. Roedel, Lebanon, and H. W. Goss, Mount Aetna, vice-presidents; Dr. Charles M. Strickler, Lebanon, secretary; Dr. Charles L. Miller, Lebanon, treasurer; Dr. Henry H. Roedel, Lebanon, censor, and Dr. Samuel P. Heilman, Heilmandale, medical and surgical reporter.

Cumberland County (N. J.) Medical Society.—At the meeting of this Society, at Bridgeton, April 9, delegates to the State Medical Society and the AMERICAN MEDICAL ASSOCIATION were named, and the following officers elected: Dr. Leslie L. Hand, Leesburg, president; Dr. Grafton E. Day, Millville, vice-president; Dr. John C. Applegate, Bridgeton, secretary, and Dr. Joseph Tomlinson, Bridgeton, treasurer.

Triple State Medical Association.—This Society met for organization at Ashland, Ky., April 18. The following officers were elected: Dr. Lester Keller, Ironton, Ohio, president; Drs. John H. Wade, Ashland, Ky., and William F. Sturgill, Ceredo, W. Va., vice-presidents; Dr. James W. Kincaid, Catlettsburg, Ky., secretary, and Dr. J. M. Salmon, Ashland, Ky., treasurer. The Society adjourned to meet at Huntington, W. Va., July 18.

New York County Medical Association.—The annual election of officers of this Association, April 15, resulted as follows: Dr. Parker Syms, president; Drs. Alexander Lambert and Francis W. Murray, vice-presidents; Dr. Ogden C. Ludlow, recording secretary; Dr. Montefiore L. Maduro, corresponding secretary, and Dr. Charles E. Denison, treasurer. Dr. E. Eliot Harris, on hebalf of the Association, presented a bronze statuette to James Taylor Lewis, counsel to the Association, in appreciation of the work done by him in regard to fixing the legal status of the Association, etc.

Western Ophthalmologic and Oto-Laryngologic Association.—The sixth annual meeting, held at Cincinnati, April 11 and 12, was the most successful in the history of the Association. The following officers were elected: Dr. Christian R. Holmes, Cincinnati, president; Drs. William L. Dayton, Lincoln, Neb., Joseph O. Stillson, Indianapolis, and Hanau W. Loeb, St. Louis, vice-presidents; Dr. William L. Ballenger, Chicago, secretary, and Dr. Otto J. Stein, Chicago, treasurer. The next annual meeting will be held in Chicago, in April, 1902.

International Congress of Physiologists.—It is announced that the sessions of the Congress from September 17 to 20, inclusive, will be occupied by demonstrations and communications, and that the sessions of September 21 and 23 will be supplementary and devoted chiefly to the reports of the International commission dealing with the standardization

of recording apparatus, calorimetric methods, etc. Dr. Z. Treves, local secretary, Corso Raffaelo, Turin, requests that all titles of communications or experiments be sent him not later than August 1. Prof. Frederic S. Lee, Columbia University, New York City, is acting secretary for America.

Louisville Pathologic Society.—This Society was formally organized April 15, with the following officers: Dr. Thomas C. Evans, president; Dr. James B. Bullitt, vice-president; Dr. James K. Freeman, secretary; Dr. Rowan Morrison, treasurer, and Dr. James Vance, curator. The Society has upwards of forty members and the membership and the roll is increasing each day. Meetings will be held on the third Monday of each month except in July and August. There is to be no social feature of the meetings, as is the custom with those in existence at present.

Florida State Medical Association.—The twenty-eighth annual session of this body was held at Jacksonville, April 10 and 11, under the presidency of Dr. William L. Hughlett, Cocoa, who in his address announced that he had been made a member of the committee on organization of the AMERICAN MEDICAL ASSOCIATION, and urged on the Association the need for closer relations between the state and national associations, for a national board of health, for a national medical university and for uniform laws to govern the practice of medicine. The following officers were elected: Dr. A. Judson Wakefield, Jacksonville, president; Drs. Louis DeM. Blocker, Chattahoochee, and George E. Welch, Palatka, vice-presidents; Dr. J. D. Fernandez, Jacksonville, secretary, and Dr. Edward N. Liell, Jacksonville, librarian. The association will meet in 1902 at Tampa.

CALIFORNIA ACADEMY OF MEDICINE.

Meeting held March 26.

The President, Dr. D. W. Montgomery, presiding.

Modified Procedure for Uterine Carcinoma.

DR. HENRY KREUTZMANN read a paper on "Suggestion for a Modified Procedure in Performing Hysterectomy for Cancer of the Uterus." He reviewed the history of the operation, and called attention to the frequent fluctuations between the abdominal and vaginal methods, going back to the time of the first vaginal hysterectomy, performed in 1822, by Dr. Sauter, in Constanz, Germany. The author favors the vaginal operation. He has the greatest respect for the experience to be gained from the hundreds of cases gathered from the enormous material of the big clinics of this country and abroad, but the deductions are not always unbiasedly derived from an accumulation of operations, and sometimes operations are performed with the intention of proving a point. He has had an opportunity of seeing his patients for a long period of time, and has observed that there are cases of vaginal hysterectomy where the uterus is removed for carcinoma, where the malignant growth was proved to exist by competent pathologists, and where the woman remained free from relapse for years. Time and again clinical histories of cases have induced him to consider a neoplasm of recent origin; examination showed apparently a slight affection only; but after hysterectomy, the inspection of the divided uterus demonstrated a great encroachment of the disease.

Considering the decided possibility of permanently curing certain forms of carcinoma of the uterus by vaginal hysterectomy, on one side, and on the other, the impossibility of exactly diagnosing the extent of the disease before the organ is cut open, the idea suggested itself to him to remove the uterus through the vagina, to cut open and to inspect the uterus, and then decide on further procedure. If he found that the vaginal portion only was invaded, or that it was a circumscribed carcinoma of the fundus, and that he could expect with reasonable surety that relapse would not occur, then he could be satisfied with a vaginal operation. If, on the contrary, he found that the disease had progressed farther than was expected, that relapse would surely follow vaginal hysterectomy, then he would open the abdomen and remove all the tissue that it was proposed to remove by the abdominal operation.

DR. JAMES F. MCCONE said that he was not quite decided regarding the method of operation in carcinoma of the uterus. In that involving the fundus, where the surrounding tissue was not affected, the removal is easy by the vagina, but in those cases involving the cervix, where the tissue extends to, and involves, the rectum and vagina, operation by either method is apt to be disappointing. In these latter cases the radical abdominal operation is certainly the best method, and it should be thorough, care being taken to remove all infected structures surrounding the uterus.

DR. J. HENRY BARBAT said that if tissue is removed simply to temporarily relieve, the vaginal operation is a good one, but if an attempt is made to eradicate the disease, then the abdominal operation gives better results. One can not always tell by physical examination how far the disease has extended, or how much the surrounding structures have been involved. He doubts very much the ability of any operator to remove as much tissue below as can be removed through an abdominal incision. Then, again, the abdominal operation allows of the specimen being removed in one piece, without a great amount of bruising, tearing and squeezing, all of which are factors in recurrence.

DR. G. CAGLIERI said that during the last two or three years he had followed carefully the arguments of the advocates of the two methods of operation. In the beginning of a case of cervical carcinoma, vaginal operation certainly seems simple. A woman 45 years of age came to him some time ago, with a carcinoma of the cervix. As this had been treated by her family physician for some months with no results, and as some of her symptoms made him suspicious that it was carcinoma, he removed it per vaginam. A pathologist, to whom he submitted the specimen, said it was not an epithelioma. One and one-half months later, however, a hard fungoid mass developed in the vagina, which certainly was an epithelioma. He is satisfied that she had a recurrence.

DR. KREUTZMANN, in closing, said that this same dispute had been going on for one hundred years. At present he is in doubt as to what should be done, for these patients seldom remain well permanently. To get the case early is most important. He has concluded that certain men, having a favorite method of operation, use that method merely in their endeavor to prove it the correct one.

Cartilage in the Knee-Joint.

DR. J. HENRY BARBAT exhibited pathologic specimens. The first was a triangular piece of cartilage, 3x2 centimeters in size, which he had removed from the left knee-joint of a man 29 years of age, who gave a history of having sprained his knee five years previously. He complained of considerable pain, and physical examination revealed considerable thickening of the joint, while at the inner side of the ligamentum patellæ the edge of the hard body could be pushed in under the ligament with ease. Operation was done under local anesthesia, and the hard body dislodged with considerable difficulty, and removed with strong mouse-toothed forceps. The wound was closed and dressed dry. After forty-eight hours great pain developed, his pulse rose to 120, and his temperature to 101. The knee was much swollen and tender. He removed one of the skin sutures and passed a probe down into the joint, allowing two ounces of slightly bloody serum to escape, which proved to be perfectly sterile on culture-media. Two days following more serum was removed. By the twelfth day his condition became normal, the pain disappeared, and he was able to walk on the fourteenth day, after operation. He reported this case to show how much disturbance might be caused by invading a large joint even when no sepsis was present. The specimen looked as though it might have been a portion of one of the semilunar cartilages, which had been broken off at the time the patient sprained his knee.

Adherent Appendix and Ovarian Cyst.

This specimen was from Miss H., who had been treated for two weeks previous to his seeing her, for some pelvic disturbance, without any relief. He found a tender fluctuating mass in Douglas' cul-de-sac, in which a vaginal incision was made and pus liberated. A drainage-tube was inserted and remained for one week, when the discharge had practically ceased. The patient was able to go to his office two weeks from the date of operation. There was still a mass on the right side of the uterus, but otherwise the patient felt perfectly well. Four weeks from the date of the first operation she was taken suddenly with severe pain over McBurney's point, felt nauseated,

and the appendix was found extremely tender. Immediate operation was consented to and the appendix found passing directly down into the pelvis, and the tip adherent to a mass in the right broad ligament. The adhesion was separated and the appendix removed. This mass proved to be an intraligamentous cyst, which was removed with the tube on that side. The left adnexa were in fair condition and were not disturbed.

This case illustrates the fact that pelvic peritonitis, from whatever cause, if followed by adhesions, is a causative factor in the production of ovarian cysts. The adhesions which surround the ovary prevent the proper rupture of the Graafian follicle, the secretion is retained, the ovum can not enter the Fallopian tube, and an ovarian cyst is born, which may subsequently rupture and be absorbed, or which may keep on growing until it causes grave disorder, and requires removal.

DR. CAGLIERI asked if the introduction of olive oil into the abdomen was of more use in the prevention of adhesions than that of normal salt solution.

DR. BARBAT replied that he had used it on several occasions, and had sometimes seen good results.

DR. KREUTZMANN said that he did not agree with Dr. Barbat when he called these specimens cysts of the ovaries. The ovaries presented were inflammatory; he had seen any number of them, always growing fast to the broad ligament. Cysts are nothing but enlargements of the Graafian follicles. He thinks it proper to be as conservative as possible in operating on these

cases, and that a piece of the ovary should be left in whenever possible. These women should keep on menstruating. If all ovarian tissue is taken out and woman ceases to menstruate, she usually suffers more than before. All we can do to prevent adhesions is to see that the bowels move soon after operation, and sew up all tears in the peritoneum.

DR. BARBAT, in reply, said that in these cases he invariably gives a rectal infusion of coffee and Epsom salts, before the patient leaves the table. The adhesions that are particularly hard to prevent are those where an ovary and tube, being bound down, are separated, leaving very raw surfaces. He draws these ovaries outside the abdomen, wipes them dry, removing as much as possible all little stringy adhesions, then with the introduction of sterile oil he has found that adhesions are less likely to form again.

Dislocation of Elbow.

DR. J. W. SHIELS reported a case and exhibited a patient who had recently fallen, sustaining a lateral dislocation of the right elbow. Dr. F. B. Carpenter was called and suggested making a skiagraph before reduction. This was done. The skiagraph, shown here, was also presented to the Academy. The dislocation was reduced, the arm put in plaster for forty-eight hours, when it was removed, and passive motion carefully commenced.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment will be answered in these columns.]

A Precipitation.

A subscriber writes us concerning the following prescription which occurred in THE JOURNAL issue of March 31, 1900. He states that in compounding the prescription that a precipitation occurs and he inquires the reasons for such a reaction:

℞ Ext. Jaborandi flu.
Ext. belladonnæ flu., āā.....3i 4
Ext. tritici repentis fl.....ʒss 16
Ext. ergotæ flu.
Ext. rhois arom., āā.....ʒi 32
Aquæ .....ʒss 16

M. Sig.: One teaspoonful three times a day.

We wish to state that the reaction of which our subscriber speaks is not due to any incompatibility of the drugs in the prescription but is due to the fact that some of these preparations have constituents which are insoluble in water and consequently are thrown down whenever water is used as the vehicle. It must be remembered that each of the above preparations are held in solution by alcohol, consequently some vehicle equal in strength to it should be used. Glycerin or alcohol substituted for the aqua will correct the trouble.

Treatment of Scabies.

Eichhorst states that the simplest remedy for the cure of scabies consists in the following combination:

℞ Balsami copaibæ
Liq. styracis, āā.....ʒi 32

M. Sig. Rub the skin well morning and evening for two days, and on the third day take a hot bath and wash the skin with green soap.

It is further stated in his practice of medicine that the solution of Vlemingkx is used a great deal in treatment of scabies:

℞ Calcii 3vi 24
Sulphuris .....ʒiss 48
Digest with rain water .....Oi 500
And evaporate to .....ʒixss 300

Sig.: Use as an inunction. Avoid excessive friction of the skin.

For Prostatorrhea.

℞ Tinct. nucis vom. .....m. x 64
Tinct. cantharidis .....m. v 32
Liq. ferri et ammon. acetatis q. s. ad..ʒvi 192

M. Sig.: One tablespoonful three times a day after meals.

Bronchopneumonia in Infants.

Carrière, in *Med. News*, says that when the disease has declared itself, keep the patient in bed in a well-ventilated room, wrap the limbs in cotton and change the position of the child frequently. Administer plenty of milk, bouillon and beef juice, and much water to drink. To lessen the congestion and increase the evacuation of the pathological products, give syrup of ipecac in teaspoonful doses every five minutes till vomiting supervenes, and follow by warm water. Then give the following:

℞ Ergotin .....gr. iii-viii 20-50
Strych. sulphatis .....gr. 1/150 0004
Syrupi simplicis 3vi 24
Aquæ q. s. ad. .....ʒiv 128

M. Sig.: One tablespoonful every three hours.

Dry cupping, mustard plasters or poultices are of benefit. Stimulate the body with warm baths or mustard baths, and with a suppository at night as follows:

℞ Quininæ hydrobromatis .....gr. i-iv 06-25
Cacao butter, q. s.

M. Ft. suppos. No. i. Sig.: One such suppository night and morning.

Cleanse the nasal passages and the mouth with antiseptic solutions.

As a bronchial antiseptic the internal administration of eucalpytus, terpin hydrate, sodium benzoate in small doses are advisable. For the feeble heart give digitalis, spartein sulphate or caffein benzoate. For the dyspnea administer oxygen; for the collapse, friction with hot flannels wet with spirits of camphor. During convalescence give oleum morrhuæ or the following:

℞ Calcii lactophos.
Calcii glycerophos. āā .....gr. iiss | 15
Aq. destil. q. s. ad.....℥iv 128
M. Sig.: One teaspoonful four times daily.

Simple Catarrhal Conjunctivitis.

℞ Acidi borici .....gr. xxx 2
Sodii chloridi .....gr. iii | 20
Aq. camphoræ .....℥i 32
Aq. destil. q. s. ad.....℥iii 96
M. Sig.: Apply to the eye every two or three hours; or

℞ Zinci sulphatis .....gr. ss | 03
Sodii biboratis .....gr. iiss | 15
Aq. camphoræ .....℥ss 16
Aquæ q. s. ad .....℥i 32
M. Sig.: Two or three drops in the eyes twice or three times a day.

Chronic Catarrhal Conjunctivitis.

Dr. Guttman, as noted in *Merck's Archives*, recommends the following:

℞ Zinci sulphatis .....gr. viii | 50
Hydrarg. chloridi corros. .....gr. ss | 03
Aq. destillatæ .....℥iss 48
M. Sig.: Instill into the eye daily.

He states that in rebellious cases the lids should be touched once a day with crystallized alum; if this causes too much smarting, it may be preceded by the instillation of a few drops of a 2 per cent. solution of cocain. Should the case be very old the lids must be painted with a 2 per cent solution of zinc sulphate, followed by a good washing. In cases of marked hyperemia, eye douches are useful. The water should be at a temperature of 70 degrees F., and a little eau de Cologne added makes it more effective. The stream is directed on the closed lid two or three times daily for several minutes each time.

Chronic Articular Rheumatism.

℞ Liq. potassii arsenitis .....℥i 4
Potassii iodid .....℥iv 16
Sodii salicylatis .....℥v 20
Syrupi sarsap. compos. .....℥iss 48
Aq. menthæ pip. q. s. ad .....℥iv 128
M. Sig.: One teaspoonful in half glass of water after each meal; or:

℞ Potassii iodidi .....℥ii 8
Vini colchici sem.
Tinct. opii camph. āā .....℥i 32
Tinct. stramonii .....℥iii 12
Tinct. cimicifugæ q. s. ad.....℥iv 128
M. Sig.: One teaspoonful three times a day in water.

The Uses of Formalin.

A. C. Jordan, of London, states that the use of formalin has been abandoned to some extent on account of its irritating properties and the pain it may produce. He has found that this may be overcome to a great extent by using glycerin as a vehicle instead of water. He has used, with success, glycerin in strength of from 1 to 4 per cent. for the following conditions: 1, as an application to the throat; 2, as a mouth wash; 3, as an application to the skin; 4, as a urethral injection.

As an application to the throat in follicular tonsillitis he applies it locally with a brush, and finds that the glycerin spreads rapidly over the tonsil and into the crypts. He uses it in 2 per cent. to 4 per cent. strength as a specific in early stages of tonsillitis. The application may be attended by a little soreness lasting a few hours. In pharyngeal diphtheria he has met with good results by these applications. For the mouth a single application of a 2 per cent. solution followed by a good mouth wash is successful in stomatitis. In parasitic diseases of the skin as in tinea tonsurans (ringworm) he thoroughly cleanses the skin and carefully rubs in a 4 per cent. solution. One application is sufficient, followed by the application of zinc ointment.

Furunculosis.

George T. Jackson, in *Med. News*, gives following treatment for boils: Attend to the general health, look for diabetes or other constitutional diseases, and give tonics. Among the remedies the following are recommended:

℞ Calcii sulphidi .....gr. 1/10 | 006
Sacch. lactis q. s.
M. Sig.: One such capsule every two hours; and:

℞ Syrupi hypophos. comp.....℥iii 96
Sig.: One to two teaspoonfuls three times a day.

Yeast is used a great deal in treatment of furunculosis. It can be used in doses of a wineglassful daily.

It is further stated that furuncles should never be poulticed nor squeezed. They are frequently aborted by injecting a drop or two of pure carbolic acid, applying an ointment of hydrarg. oxidum rubrum or painting with iodin. If the boil is mature thrust pure carbolic acid into its central opening with a sharp-pointed toothpick and dress with an antiseptic dressing of aristol or boric acid.

Ichthyol in Erythema Nodosum.

A. Brownlie, in *New York Lancet*, states he has had success from the use of ichthyol in treatment of erythema nodosum, prepared as follows:

℞ Ichthyoli ammon. .....℥ii 8
Spts. vini rectif.
Aetheris, āā .....℥iii 12
M. Sig.: Paint upon the affected part.

He states that by this application relief from the burning pain was quickly relieved. He further states that the method of preparing the paint is important. The last two preparations should first be mixed together, and then add the ichthyol.

Treatment of Gonorrhea.

℞ Hydrastinæ hydrochlor.
Zinci acetatis, āā.....gr. viii | 5
Glycerini .....℥iv 16
Aq. destil. q. s. ad.....℥iv 128
M. Sig.: Inject three or four times a day; or:

℞ Ichthyoli .....℥iss 6
Glycerini .....℥i 32
Aq. destil. q. s. ad.....℥viii 256
M. Sig.: Inject four or five times a day and retain the fluid for several minutes.

Treatment of Lupus.

Dr. L. Butte recommends that the entire field occupied be thoroughly cleansed with the following antiseptic solution:

℞ Hydrarg. chloridi corros. .....gr. v | 30
Tinct. benzoini .....m. lxxv 5
Tinct. saponis .....℥ss 48
Aq. destil. .....℥vii 224
M. Sig.: Cleanse the parts thoroughly.

Then apply compresses saturated with a 2 per cent. solution of potassium permanganate for ten or twelve minutes. Repeat every day. He claims by this method to be able to effect a cure as a rule in two or three months. —*Merck's Archiv.*

Removal of Powder Stains.

Dr. J. Neely Rhoads, of Philadelphia, states in *Amer. Medicine*, that he has removed with success, powder stains from the face due to firecrackers, etc., by means of the application of hydrogen peroxid. He applied it in full strength and gave it to the patient to apply at home. Within two days she called at his office with the powder marks all removed. So far this is the only case in which he has had a chance to test the virtue of the treatment, but it behooves the general practitioner to carry this in mind until the fifth of July next, when he may have ample opportunity to test it.

Medicolegal.

Insanity, Commissioners of; Proof of; Charging.—The Supreme Court of Nebraska holds, in the case of Biddle vs. Jenkins, that the commissioners of insanity of that state have cognizance not only of applications for admission to the hospital for the insane, but also for the safe-keeping otherwise of insane persons in their respective counties. An affidavit filed with the commissioners, alleging that a person resident of their county is insane, and his being at large is dangerous to the community, confers jurisdiction upon the board to act. But insanity, the court holds, can not be established by proof of the reputation of the person so charged. Moreover, in an action against the person making such an affidavit for false imprisonment and malicious prosecution, the court holds that the advice of counsel with regard to making the charge contained in the affidavit, to be of any avail as a defense, must have been given after a full and fair statement of all the facts within the knowledge of the person seeking the same and making the affidavit, and must have been relied upon in good faith.

Commitment to Insane Asylum without Notice.—Mr. Justice Marean holds, at a special term of the Supreme Court of New York, Kings County, in the habeas corpus case of People ex rel. Sullivan vs. Wendel, that a person finally adjudged insane, and committed to perpetual restraint, without notice or hearing, is deprived of his liberty without due process of law, and that the insanity law of that state, so far as it permits this, is in violation of the constitution. He says that when one has been duly adjudged insane—when his status as an insane person has been duly established—personal notice, or notice of proceedings affecting his interest, may be dispensed with, if it appears that such service would be prejudicial to his mental condition. But, for the protection of those who are sane, it ought not to be tolerated that any person should be adjudged insane, and finally committed, without either notice or actual hearing. It is doubtful, also, he holds, if the commitment of an alleged incompetent to the custody of her sister, even if it were valid, warranted her transfer to the hospital by the commission. The statute only permits transfers from one hospital to another.

Use of Preservative in Butter.—The first appellate division of the Supreme Court of New York holds unconstitutional, in the case of People vs. Biesecker, a statute of that state, which, without a suggestion, so far as the statute itself is concerned, either in the title or in the body of the act, that its purpose is to protect the health of the people or to prevent fraud being practiced upon them, prohibits the sale of any butter or other dairy products containing a preservative, except salt in butter and cheese, etc., and prohibits the sale or advertising for sale of any substance for use in violation of this provision. It says that if the legislature had the power to thus prohibit the use of a substance, no matter how valuable it might be, or the extent of its utility, then it could prohibit the use of any preservative in butter, milk, or cheese. It is thought by not a few people, it goes on to say, that salt not only preserves, but actually adds to the quality of, butter; and it may not be entirely optimistic to assert that, with our increased knowledge, another substance may yet be discovered which will preserve and add to the quality of butter even to a greater extent than salt does, and if such substance should be discovered, and it were not prejudicial to the public health, no one would seriously contend that the legislature could prohibit its sale or use.

Theory of Dying Declarations.—The Supreme Court of Florida says, in the case of Richard vs. State, that the dying declaration of a person mortally wounded in reference to the circumstances which caused death, in cases where the death of the declarant is the subject of investigation, are admissible in evidence when the declarant is in extremity, believes death is imminent, and he is without any hope of recovery. When the party is in extremity, all hope of this world gone, every motive of falsehood silenced, and the mind induced by the most powerful considerations to speak the truth, the situation is so solemn and so awful as to be considered by the law as creating an obligation equal to that of an oath administered in court. But the circumstances under which such statements are made must be shown, in order that the court may determine whether the declarations should be considered by the jury. The fact that dying declarations are made in response to questions asked the declarant is no ground for excluding them; nor is it material, as to their admissibility, that the questions are omitted, and the answers only given, when they are reduced to writing, read over, and signed by the declarant. Neither is it material that the attending physicians try to encourage him by telling him that his wounds are not serious, when his reply shows that he has no hope of recovery, as where one was so firm of the belief that he was going to die that he instantly told the doctor, who tried to encourage him, that he would die.

Liability of County for Service in Smallpox Case.—The Court of Chancery Appeals of Tennessee holds, in the case of Allen vs. Dekalb County, that the act of that state of 1885 does not restrict the county board of health to action only during the existence of an epidemic, but authorizes and requires it to act whenever cholera, yellow fever, or other contagious and epidemic diseases are either threatened or exist in its county. It does not wish to be understood as holding that the existence of a single case of smallpox in a county constitutes an epidemic in that county. But it is clear, it says, that smallpox is one of the diseases mentioned in the act as contagious or epidemic diseases. It belongs to that class of diseases which, unless restricted and prevented by vigorous measures, becomes epidemic, and it was to prevent the spread of just such diseases that the act of 1885 was passed. It considers, too, that it may take judicial knowledge of the fact that in cases of smallpox a strict and rigid quarantine of the persons affected or exposed is always required. Wherefore, although it does not find any power imposed upon the county judge by law to appoint a county health officer or jail physician during the temporary absence of that official, it holds that the employment at such a time by the county board of health of a physician to attend a suspected case of smallpox and take measures to prevent the spread of smallpox from the patient is both proper and necessary. Moreover, it being provided by the act that all necessary expenses incurred by the board of health in preventing or restricting such epidemic diseases shall be made a county charge, the county court being directed to order their payment, this, the court holds, fixes upon the county a liability for all reasonable expenses and charges incurred in such a case as that just stated, including liability for the services of the physician temporarily employed by the board of health. Nor does it consider that it would make any difference that he was a partner of the regular county health officer and had agreed with the latter to do the county business during the latter's absence. Private agreements, the court declares, can not be recognized as substituting one individual, who has not been duly elected and chosen for a public officer, for another, who has. Besides, even conceding—what it does not think can be—that the physician appointed in this emergency was either *de facto* or *de jure* at that time county jail physician or health officer, the court says that the law imposes no such duties upon that official as he was called upon to discharge in this case. So the court takes it that, if the county jail physician or health officer should be required to give his time and attention during an epidemic of yellow fever, cholera, smallpox, or the like, to the suppression of the disease, he would be entitled to compensation for such time and attention aside from his salary fixed by the county court as compensation to him for services rendered as county jail physician. Nor is the county court given any power to adjudicate or pass upon the merits and amount of any such claim in a final and conclusive way. Neither does the law require the exact amount of the physician's compensation in such a case as this shall be agreed upon beforehand. Last of all, the court holds $500 a low and reasonable charge for the services rendered in this case, the physician having given 30 days' time, and, besides treating the case of smallpox, rendered most efficient services in respect to quarantine and disinfection and lost at least $266 in his

practice, and some patients permanently, besides which nine reputable physicians fixed the compensation, on the facts presented, at $500.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Boston Medical and Surgical Journal, April 11.

1 Review of the Literature of the Therapeutic Use of the X-rays. Harvey P. Towle.
2 *Pathology of the Newborn as Illustrated in the Practice of the Writer. Frederic W. Taylor.
3 *Oblique Subtrochanteric Osteotomy, for the Lengthening of the Femur, and Correction of the Deformity of Flexion Resulting from Hip-Joint Disease. E. G. Abbott.
4 A Case of Chin Left Posterior. H. G. Swain.

New York Medical Journal, April 13.

5 *German Text-books Half a Century Ago; History and Reminiscences. A. Jacobi.
6 A Shielded Piston Syringe for Urethral and Vesical Irrigation. J. Rilus Eastman.
7 *Correction of the Deviations of the Nasal Septum, with Special References to the Use of the Author's Fenestrated Comminuting Forceps. John O. Roe.
8 Pathology of Intrauterine Death. (Continued.) Neil MacPhatter.
9 *The Preponderance of Male Stammerers Over Females. David Greene.
10 Management of Gonorrhea. Boleslaw Lapowski.

Philadelphia Medical Journal, April 13.

11 *Ligation of the Carotid Artery as an Operation Preliminary to Resection of the Superior Maxilla. Carl Schlatter.
12 *Thoughts on the Treatment of Diabetes Mellitus, being Part of a Clinical Lecture Delivered at the Philadelphia Hospital, March 13, 1901. James Tyson.
13 *Medical Relations of the Prevailing Forms of Food Adulteration. Henry Leffmann.
14 Ruptured Traumatic Aneurysm of the Femoral Artery Due to Gunshot Wound; with Report of a Case. Wallace Neff.
15 *Multiple Tumors of the Sciatic Nerve. John B. Roberts.
16 Venous Angioma of the Flexor Muscles of the Fingers. John B. Roberts.
17 Diabetes Mellitus as a Cellular Fault. Thomas C. Ely.

Medical News (N. Y.), April 13.

18 *Immediate and Remote Results in One Hundred Conservative Operations on the Ovaries and Tubes; with Brief Reports of Four Cases. W. L. Burrage.
19 *Tropacocain Hydrochlorate—A Substitute for Cocain Hydrochlorate in Spinal Anesthesia. Willy Meyer.
20 *Study of Cases Presenting Symptoms of Asthenopia and Anomalies of the Ocular Muscles in Which Ablation of the Middle Turbinal Was Effective Treatment. Heber Nelson Hoople.
21 *Acute Traumatic Malignancy. William B. Coley.
22 The Akouphone and its Limitations. J. A. Kenefick.
23 Perforating Gunshot Wound of the Chest with Fracture of Both Bones of the Left Leg and Lacerated Wound of the Right Thigh: Recovery. Victor Cox Pedersen.

Medical Record (N. Y.), April13.

24 *Remarks on Enteroptosis. Max Einhorn.
25 Small Hospitals and their Administration. Louis N. Lanehart.
26 *X-Ray Photography. Eugene R. Corson.
27 Some Facts of Responsibility in Spirit and Drug Takers. T. D. Crothers.
28 An Unusual Case of Partial Recovery from Embolism of the Arteria Centralis Retinæ. Edgar S. Thompson.

Cincinnati Lancet-Clinic, April 13.

29 *Acute Lobar Pneumonia. Charles F. Hope.
30 Tobacco and Tobacco Amaurosis. A. N. Ellis.

St. Louis Medical Review, April 13.

31 *Gonococci in Gonorrheal Secretions. A. Ravogli.
32 Gonococcus Infection in an Infant; Metastatic Joint Abscesses. W. L. Johnson.
33 Review of MacNaughton-Jones' Practical Manual of Diseases of Women and Uterine Therapeutics for Students and Practitioners. Mary Dixon-Jones.

American Medicine (Philadelphia), April 13.

34 *The Medical Aspects of Carcinoma of the Breast, with a Note on the Spontaneous Disappearance of Secondary Growths. (Concluded.) Wm. Osler.
35 *Gastrojejunostomy in Gastriectasis. A. H. Cordier.
36 *The Mortality of Operations for Obstructive Jaundice. John B. Deaver. (Concluded.)
37 *Phelps Operation for Club-foot, with a Report of 1650 Operations. (Concluded.) A. M. Phelps.
38 An Obscure Case of Hysteria with Associated Right Mydriasis and Amblyopia and Left Myosis. H. A. Hare.
39 *Indications and Limitations of the Vaginal Operation in Pelvic Diseases in Woman. J. Riddle Goffe.
40 Deep Breathing as a Curative and Preventive Measure. John H. Pryor.
41 "The Most Useful Citizen": A Study of Human Dynamics. F. W. Langdon.
42 Dust as a Factor in Diseases of the Upper Respiratory Passages. W. Scheppegrell.
43 Duty of the Public to the Medical Profession. Andrew H. Smith.

Medical Age (Detroit, Mich.), March 25.

44 Diseases in Schools, and Medical Inspection. E. V. Silver.
45 *Municipal Prevention of Disease. Heman Spalding.
46 *Immunity as a Factor in Prevention of Disease. Adolph Gehrmann.

Medical Fortnightly (St. Louis), April 10.

47 Urine Semeiology. Dr. Charrin.
48 *Insanity of Puberty. Frank Parsons Norbury.

Pediatrics (N. Y.), April 1.

49 *The Value of Alcohol in the Acute Infectious Diseases of Children. Augustus E. Bieser.
50 *Acute Articular Rheumatism in Children. Frank C. Simpson.

New York State Journal of Medicine (N. Y.), April.

51 *Surgical Management of Umbilical Hernia with Large Ring. E. D. Ferguson.
52 *On the Analogy Between Nervous Conductibility and Electric Conductibility, and their Relation to the Functional Neuroses. A. D. Rockwell.
53 *Management of Normal Labor, Including the Use of Forceps. Austin Flint, Jr.
54 What Determines the Real Value of Medical Papers? Louis C. Agar.

Ophthalmic Record (Chicago), March.

55 A Contribution to the Study of Injuries to the Eye. A. Levy.
56 A Case of Subacute Retro-bulbar Optic Neuritis First in the Left Eye, Later in the Right Eye. Edward Swasey.
57 A Case of Inflammatory Glaucoma Presenting Unusual Features. S. D. Risley.
58 Jeweler's Loupe for Examining the Eye—Mirror Monocle. Geo. F. Keiper.
59 A Case of Left Homonymous Hemianopsia, Probably Hysterical. M. W. Zimmerman.

Bulletin of the Johns Hopkins Hospital (Baltimore), March.

60 The Genesis of Carcinoma of the Fallopian Tube in Hyperplastic Salpingitis, with Report of a Case and a Table of Twenty-one Reported Cases. E. R. LeCount.
61 Report upon a Case of Gonorrheal Endocarditis in a Patient Dying in the Puerperium; with Reference to Two Recent Suspected Cases. Norman MacLeod Harris.
62 *An Experimental Study Concerning the Relation Which the Prostate Gland Bears to the Fecundative Power of the Spermatic Fluid. George Walker.
63 Further Observations on Epinephrin. John J. Abel.

Physician and Surgeon (Detroit and Ann Arbor), February.

64 A Half Century's Progress in Medical Jurisprudence. Frank T. Lodge.
65 The Etiologic Factor. Charles G. Jennings.

SYMPOSIUM ON PNEUMONIA:

66 Symptomatology and Diagnosis. George E. McKean.
67 The Morbid Anatomy. Edmund A. Chapoton.
68 The Treatment. Ernest L. Shurly.
69 Full-Term Ectopic Pregnancy, with Reports of Two Cases. James G. Lynds.
70 Antiseptic and Antipyretic Treatment of Typhoid Fever. Fred Grover.
71 Goiter and its Treatment. H. Wellington Yates.
72 Relation of Municipal Laboratories to the Control of Tuberculosis. Augustus W. Crane.
73 The Detroit Academy of Medicine. Albert B. Lyon.
74 Some Views of Curettement of the Uterus from the Standpoint of a General Practitioner. Elmer D. Gardner.

Annals of Gynecology and Pediatry (Boston), April.

75 *Fibroid Tumors of the Uterus, Their Relation to Diseased Adnexa. Origin of Fibroid Tumors. When is the Proper Time for their Removal? Mary Dixon Jones.
76 *Facts and Suggestions Pertaining to Diphtheria. James H. Taylor.
77 *Suppurative Mastitis in the Newly-Born. Emery Marvel.
78 Etiology of Uterine Hemorrhage. George W. Kaan.
79 Treatment of Uterine Hemorrhage. Francis H. Davenport.
80 *A Case of Septic Rheumatism of Tonsillar Origin. Carolus M. Cobb.
81 *Two Cases of Jacksonian Epilepsy. John D. Target.

Medical Bulletin (Philadelphia), April.

82 Scabies—Tinea Versicolor—Impetigo Contagiosa. J. V. Shoemaker.
83 Caroid in Maldigestion of Infants. Arthur W. Condict.

84 A Case of Sneezing. Dr. Masse.
85 Hemorrhagic Affections of the Skin. George A. Hewitt.

Toledo Medical and Surgical Reporter, April.

86 Report of Surgical Cases (Excision of Elbow, etc.). W. H. Fisher.
87 Value of X-Ray to the General Practitioner. S. W. Beckwith.
88 Pathological Examination of the Eye. Frank Jacobi.

Fort Wayne Medical Journal-Magazine, March.

89 *The Role of the Kidney in the Production of the Toxemias of Pregnancy. B. Van Sweringen.

International Journal of Surgery (N. Y.), April.

90 Regional Minor Surgery. George G. Van Schaick.
91 Traumatic Gangrene. J. B. Murfree.
92 Nose and Throat Work for the General Practitioner. (Continued.) George L. Richards.
93 Practical Suggestions upon the Treatment of Rectal Diseases. (Continued.) James P. Tuttle.
94 Details in the Preparation of Patients for Operation Outside of Hospitals. Lewis W. Rose.
95 Complete Sloughing of Both Nipples. J. A. Wessinger.
96 Diabetes, Why it May Follow Head Injuries. A Successful Method of Treatment. John B. Hawes.
97 Local Anesthesia Without Risk of Danger. E. R. Rasely.
98 A New Operation for Anal Fistula. R. D. Fairex.
99 Acute Tetanus. W. R. Cummings.

Oklahoma Medical Journal (Guthrie), March.

100 Epileptic Convulsions. H. M. Fagaines.
101 Neurasthenia. A. DeBord Young.

American Gynecological and Obstetrical Journal (N. Y.), March.

102 *Pus in the Peritoneal Cavity. Robert T. Morris.
103 *The Complications of Gonorrhea in Women and their Prophylactic Treatment. Joseph Taber Johnson.
104 *Organotherapy in Gynecology. Wilmer Krusen.
105 Pregnancy in Uterus Bicornis. George H. Noble.
106 *Operative Treatment of Cancer of the Uterus. E. E. Montgomery.
107 Anne Murray, the First Trained Nurse. Ely Van De Warker.

Columbus Medical Journal, March.

108 Points in Cellular Pathology. D. N. Kinsman.
109 Bronchitis and Broncho-pneumonia; Pathological Anatomy. D. N. Kinsman.
110 Bronchitis and Broncho-pneumonia. Diagnosis and Symptomatology. John L. Gordon, Jr..
111 Bronchitis and Broncho-pneumonia. Treatment. M. T. Dixon.
112 Bronchitis and Broncho-pneumonia. Treatment in Children. J. C. Lawrence.
113 Bronchitis and Broncho-pneumonia Complicating Surgical Operations. F. F. Lawrence.
114 Report of a Case of Ischio-scrotal Eczema Madidans Rubrum. N. E. Aronstam.
115 Heredity. L. Woodruff.

Laryngoscope (St. Louis), March.

116 *Papilloma of the Larynx. Francis J. Quinlan.
117 *On Nasal Suppuration. Z. L. Leonard.
118 Case of Congenital Web in Larynx. Albert B. McKee.
119 *Observations on the Pathology of the Pharyngeal Tonsil and its Operative Removal. H. Gradle.
120 Resorcin as a Preservative for Suprarenal Extract Solution. Seymour Oppenheimer.

Medical Standard (Chicago), April.

121 Drug Habits and their Treatment. T. D. Crothers.
122 A Surgical Ear and Nose Clinic. Wm. L. Ballenger.
123 The Etiology of Appendicitis. A. J. Ochsner.
124 Administration of Anesthetics. A. A. Kerr.
125 Typhoid Fever: its Complications and Sequelæ. J. T. Moore.
126 Tinea Versicolor. N. E. Aronstam.
127 Typhoid Fever, Complicated by Suppurating Ovarian Dermoid Cyst. E. J. Kemp.

Kansas City Medical Index-Lancet, April.

128 Gunshot Wounds of the Chest, with Report of a Case. J. Herbert Austin.
129 Cerebrospinal Meningitis. John Punton.
130 Fibroma Molluscum. Wilmot C. Willets.

Hot Springs Medical Journal, March.

131 Autointoxication from Renal Insufficiency With and Without Diseased Kidneys: with Report of Some Remarkable Cases. James T. Jelks.

Medical Times (N. Y.), April.

132 Treatment of Urethritis in the Male. James Pedersen.
133 Five Years' Experience with the Antiseptic Treatment of Typhoid Fever. J. A. Crook.
134 Nasal Diseases and their Differential Diagnosis. David H. Stevenson.
135 Case of Choledochotomy of Impacted Stones. Howard Lilienthal.

Atlanta Journal-Record of Medicine, April.

136 Extrauterine Pregnancy, with Report of a Case of Simultaneous Pregnancy in Both Tubes. C. R. Robins.
137 Saline Transfusion, Hemorrhage and Shock. J. L. Campbell.

AMERICAN.

2. **Pathology of New-Born.**—Taylor makes a general statement of the pathologic conditions observed in an experience of 654 births, there were 23 still-births, 22 cases in which death occurred shortly after birth, and 10 where respiration was delayed. Besides these there were two cases of deformity, 3 of ophthalmia, 2 of melena, 2 of fractured clavicle—1 also included under melena—1 of depressed skull and 1 of facial paralysis, making a total of 64 or about 10 per cent. abnormalities at birth or during the first few weeks of life. The details are given at length. Of the children born alive, who died, 8 showed no cause of death except a lack of vitality, 6 were premature, and in 1 case the cause of death was difficult to explain, excepting the suggestion that it was smothered accidentally three days after birth.

3. **Oblique Subtrochanteric Osteotomy.**—The author thinks his method has an advantage in obviating the use of such powerful force and the destruction of so much soft tissue as is done in the method employed by German surgeons, Hoffa, Lauenstein and others, which they consider is an advantage over Gant's operation. In the patient whose case is reported the site of the operation was prepared in the usual manner and the patient placed on the side with large sand bags between the thighs, against the perineum. The osteotome, which was of the same width as the bone, was entered through the skin and underlying tissue upon the femur, about 4 in. below the upper border of the trochanter major, where it was firmly held at an angle of 30 degrees. It was then driven in the bone as far as the inner compact tissue, when it was exchanged for a narrower one and the division continued well into this, then withdrawn and the section completed by fracture. The leg was placed in the corrected position and dressed. After the patient was put back in bed a Buck's extension was applied with side plasters reaching to the fracture. A side splint from the axilla to the foot was loosely bandaged to the body, and weights applied on the end of the extension and gradually increased. The muscles relaxed in thirty-six hours, when the length and position were regulated and the splint firmly applied, retaining the leg in the corrected position. Measurements were frequently made to ascertain the condition, and at the end of the eighth week the apparatus was removed and the patient allowed to move around in bed. At the beginning of the tenth week crutches were given and free exercises permitted. The femur was lengthened 1.5 inches by actual masurement and the flexion was completely corrected as the adhesions were broken up by the operation, allowing movements of 15 degrees. Recovery was uninterrupted, union being firm in eighth week. The patient now walks easily with the heel of the shoe raised three-quarters of an inch on the inside. The points which Abbott considers of special importance are the making of a radiograph to determine the size of the femur, the exact location of the osteotome, the width of the osteotome and the angle at which it has been held, both to be governed by the size of the femur. The amount of weight required with different patients varies and must be gradually increased until results are obtained, when it may be lessened and held by side splints.

5. **German Text-Books.**—Jacobi's article is an interesting series of reminiscences of German teachers and German medical instructions fifty or sixty years back.

7. **Septal Deviations.**—The conditions of septal deviations are described as to their frequency, and the author's method given, with a description of his instruments, consisting of forceps with one blade fenestrated, the other fitting in the opening, by which a portion of the septum is crushed and thereby straightened. Roe claims that it gives a special facility for fracturing the osseous and osseocartilaginous portions without incising or even lacerating the soft parts, and that wrinkles and curves can be readily removed without other operative measures excepting the removal of spurs and ridges.

Dislocation of cartilage or bones can be reduced, and it avoids producing strain on the other portions of the septum than those immediately operated on, thus avoiding the danger of disturbing its upper attachments, and by complete removal of the elasticity of the attachments of deflected parts, it facilitates more ready adjustment of the septum to its normal position and diminishes the length of time that the support is required.

9. **Stammering.**—Greene shows the predominance of males over females with this infirmity and believes that the cause of this diversity is largely in faulty inspiration. The tendency to misdirected effort in the diaphragm is the most prolific cause of stammering among men, but is rarely found among women. In males quiet respiration is effected almost exclusively by the activity of the diaphragm, but in speaking some considerable emptying of the air in the lungs must take place, and this can only be affected by combined diaphragmatic and costal breathing. In females he says costal breathing is the habitual mode of respiration, hence, their lungs are generally well supplied with the amount of air necessary. The number of cases in his table in which stammering was caused by mismanagement of the voice in males was 82 or 35.8 per cent., while in the females it was 24 or 88 per cent. of the total number of cases. Instead of setting the vocal cords into vibratory motion by means of the expiratory current, the stammerer of this class makes a futile attempt to produce these vibrations by the muscles of the larynx, and every time the attempt is made to pronounce a word beginning with a vowel or vocal consonant, a noise is produced much like the bleating of a sheep. It is natural that this tendency to throw too much energy into the muscles of the larynx as a substitute for expiratory force should be more common among females than among males. The average respiratory force of the female is considerably lower than that of the male. As regards the treatment, he thinks the cases due to faulty inspiration are much more hopeful. The patient can be taught to educate his breathing and control his costal muscles by gymnastics. The organ of voice, however, is not so easily brought into control. Hence the stammering of females showing itself in spasms of the vocal cords usually proves very obstinate.

11. **Carotid Ligation in Section of the Superior Maxilla.**—From a general consideration of the subject, his own experience and the facts as given in the literature, Schlatter summarizes, in substance, as follows: 1. Preliminary ligature markedly diminishes the hemorrhage as well as danger from blood aspiration. 2. It is highly recommendable in all anemic individuals, those of lowered vitality from cachexia and hemorrhages, provided there is no vascular disease, especially arteriosclerosis. Exposing the bifurcation of the carotid in advanced cases is itself indicated for the purpose of extirpating the lymphatic glands which are generally the first attacked by the metastasis. 3. In by far the most cases of ligation of the external carotid it should be a permanent ligation. Conducted antiseptically the operation is not dangerous. The ligature can be applied by enlarging above the incision which has been made for exposing the bifurcation. 4. In exceptional cases it becomes imperative to ligate the common carotid, which if done temporarily seems to be less dangerous than a permanent ligation. He reports three cases in detail and remarks in conclusion in regard to the prosthetic dentistry in his case of double resection of the upper jaw.

12. **Diabetes Mellitus.**—Tyson thinks the prominence assigned to excessive glucose formation in this disease has been too great. The presumption is, he thinks, not that it is produced in greater quantity but that its metabolism is in some way diminished. He asks, should we not direct our therapeutics to measures to aid in this metabolism and give remedies that will increase the oxidation of glucose thrown into the blood from the liver. Of such he mentions arsenic, which he thinks is useful at least in the mild cases. The dose should not exceed 3 drops three times a day, of Fowler's solution, or 1/30 grain as often of arsenious acid. Other remedies mentioned are iron, massage and exercise. The close connection between this disorder of metabolism and the nervous system is also mentioned, and he suggests that the effects of opium derivatives and coal-tar products may be due to their influence on the nervous mechanism of metabolism of glucose in the dorsal capillaries. Pancreatic diabetes, he thinks, is also a condition which can be reconciled with this theory. There is a possibility that the pancreas gives out a secretion under normal conditions, the presence of which is necessary for the proper metabolism of glucose.

13. **Food Adulteration.**—Several criticisms are made by Leffmann, of the common statements in regard to food adulteration, especially some that have been recently given out in a prominent newspaper. He thinks that Congress would never have taken the trouble to look after some of these adulterations if it had not been necessitated for war tax purposes. Among the criticisms he makes are those on the statement that glucose is a harmless food. He asks what we know about the commercial glucose. There is certainly 15 per cent. of unfermentable material which is very little understood either chemically or physiologically. The recent experience of England with invert-sugar in the manufacture of beer is noted as illustrating the point and showing that glucose is not necessarily a wholesome product. Butter substitutes are also mentioned, and he thinks that the benefit derived from these do not reach the poor man as he gets oleomargarin at about the same prices as the pure article. In regard to baking-powders, he says there is no satisfactory proof brought forward to show why alum is any more injurious than cream of tartar. The probability is that both are injurious. The legislation in regard to butter coloring has also its surprising features. Experiments have been made to show that colorings are injurious, but the tests are of no special value. To give a person in one dose as much coloring matter as would be sufficient to color all the butter he eats in six months is about as scientific as would be the same experiment with tea, coffee or pepper. It is worth noting, he also remarks, that farmers' influence in many states has managed to secure the prohibition of coloring oleomargarin while not interfering with butter coloring.

15.—See abstract in THE JOURNAL of March 23, p. 835.

18. **Conservative Operations on the Ovaries and Tubes.**—Burrage's experience covers 156 cases, 100 of which have been under observation for at least one year after operation: 3 patients died from the operation, which were accountable for by special conditions. The greatest interest is in the late results of the preservation of ovaries and tubal tissue. In a few instances, while he has left the ovary or part of an ovary in cases of hysterectomy, the symptoms of an artificially induced menopause seem to be lessened. In about 73 per cent. of his cases there was symptomatic cure. The anatomical cure, that is ovaries and tubes normal and well placed, was noted in 44 out of 69 cases, or 64 per cent. Some enlargement or prolapse of ovaries was found in the remaining 25 cases. Pregnancy followed operation in 19 cases, in none, however, after resection of a closed tube, the tubes being closed at the time of operation. As bearing on the question of resected ovary becoming diseased at some future time, he refers to a former article in which out of 85 cases in only one was another operation necessary. Four cases are reported. In one pregnancy occurred twice after removal of both tubes and one ovary for tubal mole, chronic salpingitis, and cyst of the ovary. We have to assume in this case that an opening became established on one side or the other between the catgut stitches so that the uterine cavity was connected with the peritoneal cavity, where the remaining ovary was located, and without intervention of the tubes.

19. **Tropacocain Hydrochlorate.**—Meyer reports his experience with this drug, which he finds is less than one-half as toxic as cocain, in producing spinal analgesia. It has a less distressing action on the heart and recovery from its effects is much more rapid. It has also a further advantage of being far more stable in solution than cocain hydrochlorate. He will hereafter, he says, have the solution made as follows:

R.	Tropacocain hydrochlorate ..... gr. ¼	0.15
	Sodium chlorid ..... gr. i	0.6
	Distilled water ..... grs. clx	10

Each ten minims of this solution contains 1 centigram (1/6 gr. of the salt); fifty minims, therefore, contain 0.05, the generally required dose. He is so satisfied with the results that he shall continue to use spinal anesthesia in urinary surgery and in fact wherever the indication is present.

20. **Asthenopia from Nasal Disease.**—Hoople reports cases of ablation of the middle turbinal for ocular anomalies, asthenopia and muscle defects, and he thinks a larger proportion of such cases are due to nasal disturbances than has generally been supposed.

21. **Acute Traumatic Malignancy.**—In an earlier article Coley had called attention to the fact that in many cases with sarcoma there was a history of antecedent injury, and had endeavored to show the important etiologic relationship between it and the disease. Further study has confirmed his decision and he deduces the following main conclusions: 1. Trauma is a very important factor in the causation of malignant tumors. 2. This relationship between injury and malignant tumors furnishes additional and by no means unimportant evidence in support of the infectious origin of such tumors. The paper reports a number of cases.

24. **Enteroptosis.**—After defining the disease, Einhorn discusses its etiology. The corset and the weakened condition of the abdominal wall appear to be the most important primary factors. Although in many cases this last condition is congenital, there are some in which this is not the case; enteroptosis may develop, for instance, after sudden or great loss of flesh and after abrupt changes in the volume of the abdominal cavity. Movable kidney is usually present and may be taken as an index of the occurrence of the condition. Einhorn corroborates Glenard's statements as to the frequency of enteroptosis. Of 1912 cases of gastric diseases during the year 1900, 347 were of abdominal ptosis, 70 in men, 277 in women; 240 of these were cases of enteroptosis, 20 in men, and 220 in women, and 212 of the 240 were accompanied by movable kidney. The symptoms are reviewed and discussed. He considers the splashing sound the easiest and best method of determining gastric ptosis; owing to the area over which it can be produced, it will indicate the position of the organ. He mentions, among other things, Glenard's belt test: The physician, standing behind the patient, encircles the lower part of the abdomen of the latter with both of his hands, supporting and partially lifting it. If this gives relief it speaks in favor of the presence of enteroptosis. Treatment in most cases consists in the employment of a well fitting abdominal support, together with ample nutrition and exercise. Massage is of value only in mild cases or in very anemic patients, not in the advanced stage of the condition. Intragastric application of electricity is useful in functional disturbances of the stomach. Among the drugs, iron and arsenic are often indicated in anemic conditions, while the bromids may be given to allay great nervousness. The digestive disturbances and constipation must be looked after.

26. **X-Ray Photography.**—Corson gives his experience with this method. He finds that a spark alone is no index of x-ray efficiency. In the coil manufacture, after a certain length of spark has been obtained every effort should be toward increasing the amperage to the limits of the tubes; a ten or twelve inch spark is quite enough if a fat or multiplied one. He does not have much faith in the static machine, because it gives a thin spark, all tension, no quantity. The effects are very much inferior to those of a good coil. A change from a coil giving a thin ten-inch spark to a coil giving a very fat and multiplied spark of ten inches produces startling differences in photographic results, giving a negative of brilliant and fine detail. The difference is the amount of current going through the tube. The time of exposure and developing were both shortened. In his work he has endeavored to bring out the bones on a white background, taking out the flesh and superficial details. If there is anything to be left to the imagination let it be the superficial and not the bony parts; it is the bones we are after. He secures absolute immobility by binding the part firmly to the plate and by placing a heavy weight on the limb to prevent any movement even from the arterial pulsation. This can be done in a way as comfortable as possible to the patient. The article contains also details as to exposure, developers, etc.

29. **Pneumonia.**—The various methods of the treatment of pneumonia in the past, the etiology, symptoms, and prognosis are discussed by Hope, who points out its increasing fatality in recent times. He advises the use of guaiacol carbonate and creosotal free, and as an auxiliary or substitute treatment, large doses of sodium salicylate and large doses of strychnia especially where exhaustion of cardiac weakness exists. Alcoholic stimulants are often of the greatest importance and in the pneumonia of drunkards, a *sine qua non*. Give as little medicine as will meet the indications so as to avoid gastric trouble. Hot applications are usually better than cold, but wet or dry heat, hot-water packs, sinapisms, or turpentine stupes are all available measures. In some cases tincture of iodin painting of the chest may be done and dry cupping relieves the obstinate pleuritic pains. The nourishment should be bland, digestible and mainly fluid. The patient should be kept at rest in bed until there is resolution of the stomach. Perfect ventilation is necessary. Convalescence should be carefully guarded and tonic medication given as needed.

31. **Gonococcus.**—Ravogli describes the gonococcus as it is found in pathologic conditions. He thinks that marriage should never be permitted or advised while the gonococcus is present, nor even after it has disappeared, unless we are fully satisfied that there are no more pus corpuscles in the secretion and in the shreds.

34. **Carcinoma of the Breast.**—Osler describes and discusses causes of mammary carcinoma according to the associated manifestations, cerebrospinal, thoracic and abdominal. Fourteen cases altogether are reported. He points out the importance of looking for carcinoma in cases of painful paraplegia and nerve-root pains. In two of the cases reported, with cerebrospinal symptoms, spontaneous disappearance or improvement of symptoms, and in one of them, of growths took place. Reference is made to other similar cases in the literature.

35. **Gastrojejunostomy in Gastrectasis.**—Two cases are reported by Cordier, who offers the following conclusions: 1. Carcinoma of the pylorus, even though removed, returns quickly and always kills. Pylorectomy is attended by a high mortality and is not justified in advanced cases. Gastrectasis due to malignant closure of the pylorus is best treated by a gastrojejunostomy. Wolfler's or Von Hacker's methods meet indications best. 2. It is not necessary to twist the bowel in making the anastomosis, to prevent bile entering the stomach. 3. The anastomotic opening in the stomach should be at the most dependent point. The mortality of the operation is low. In all cases with marked gastric dilatation, with pain, emaciation and invalidity, gastrojejunostomy is indicated. The relief of pain due to efforts of the stomach to empty itself is immediate. The patient gains in weight and if the disease is non malignant he is restored to health. Tabulated statements of results of American and European operators are given.

36.—See abstract in THE JOURNAL of March 23, p. 836.

37. **Club-Foot.**—The conclusions of Phelps' very fully illustrated article are, in substance: All feet with shortened skin and ligaments, at any age after the fourth month, should be operated on; very prolonged medical treatment for months or years in any case is wrong. While he admits that many cases can be benefited or cured, the best and easiest way is to operate. The operation is not complete until the foot is placed in the supercorrected position flexed upon the leg and the heel prominent so that it strikes the ground, in walking, before the anterior segment of the foot. Then it takes the weight of the body so as to turn itself still further outward and thus prevent relapsing. Club-foot shoes he discards. By manipulation the foot is carried to the proper position and flexed there by plasters or plaster cast. The treatment just begins after the

operation is complete. Osteoclasis should be performed in all cases of inward twist of the tibia, or a relapse may be looked for. Bone operations should never be performed primarily. Open incision should supplement all cases of subcutaneous tenotomy when it fails to correct. Short tendons should be cut, not stretched, for prolonged stretching deforms the entire tarsus. Cure occurs only when the heel strikes first in walking and when new facets are formed on tarsal bones. Pirogoff's operation was required in one-fourth of 1 per cent. of his cases. Open incision should never be made unless the skin resists and will not stretch enough to allow supercorrection and proper unfolding of the foot. The weight of the body falling upon any club-foot shoe or brace nullifies the action of the apparatus. For this reason Adams treated one foot at a time with his apparatus, using crutches till the foot was cured.

39. **The Vaginal Operation.**—Goffe considers the vaginal operation preferable in uterine cancer, in fibroids not so large as to simulate the fourth or fifth month of pregnancy and in salpingitis and ovarian abscess. He uses the angiotribe exclusively in these cases. It is, he thinks, the ideal route in operating for uterine displacements by opening through the anterior fornix, breaking up adhesions, delivering first the uterus and then the appendages into the vagina, performing such conservative work as is required to preserve the function of the ovaries or ovary, and finally curing the displacement by shortening the round ligaments. He has treated some seventy cases this way and pronounces it the ideal operation, doing all the good that the Alexander operation or abdominal suspension can do, and free from their objections.

45.—See abstract in THE JOURNAL of March 16, p. 757.

46.—Ibid.

48. **Pubescent Insanity.**—The points made by Norbury are that hereditary taint in these cases should always be looked for and should include a search for not merely insanity but any other nervous disease or neurotic condition. He calls attention to the special problems which occur during the developmental period in youth, and remarks that in the average cases of insanity of puberty nutrition is at fault and the strain on the system increases in consequence. In most of these cases there is anemia. A study of the blood, estimation of hemoglobinuria and counting of red cells is important, and the nutrition can not be too carefully watched. The diet should be such as is given in neurasthenic cases, and the bowels carefully regulated to prevent autointoxication. Tonics are of more value than sedatives.

49. **Alcohol.**—Bieser thinks that in certain conditions alcohol in called for, as in diseases of children with persistence of high temperature, rapid irregular dicrotic pulse, and marked prostration. He thinks there is hardly any single drug which so well meets the demands of nutrition where tissue makers must be excluded from the dietary. As a saver of nitrogenous waste its effects are of the most benefit. It also reduces fever and keeps the vital function of animal heat production at its proper place, thus aiding Nature, especially the infectious diseases where it is due to diminished elimination of heat rather than to increased production. It also correlates energy by keeping the pulse and respiration ratio normal and assisting the vital functions. In diphtheria, especially in septic nasopharyngeal cases, he thinks it is especially valuable in conjunction with iron and mercury, sepsis and bronchial pneumonia being the diseases which more than any others give evidence of symptoms which demand not merely an alcoholic stimulant but an alcoholic support.

50. **Rheumatism in Children.**—Rheumatism, according to Simpson, is an infectious disease. He has never seen a case in children that did not begin with an attack of indigestion. Heredity, he finds, is one of the most certain predisposing causes. In children the salicylates have to be used sparingly on account of the depression they produce. He is a great believer in the alkaline treatment following the use of the salicylates. It assists in controlling pain and fever, and never affects the stomach. Rest in bed is the only safeguard against endocarditis. When this has occurred he thinks opium useful in small doses. For the extreme emaciation often present he thinks peptomangan one of the best tonics and advises being in the open air as much as possible.

51.—See abstract in THE JOURNAL, XXXV, p. 1171.

52.—Ibid., p. 1104.

53.—Ibid.

62. **Prostatic Secretions.**—Walker has experimented to find the relation which the prostatic gland secretion bears to the fecundative power of the spermatic fluid. He operated on rats, in which the gland can be easily removed without causing other damage, in several series, in some of which the anterior lobes alone were excised and effects noted, and in others the whole glands. In the first series of seven pairs the anterior lobes were excised, 2 bred normally, 2 had small litters, and 2 were negative. In the second series of 15 pairs, where the anterior lobes were removed, 9 bred normally, 5 proved negative, and 1 escaped. In the third series of 3 pairs, after removal of the anterior lobes, 4 out of five bred normally and 1 was negative; after the second operation, where complete removal was done, 1 bred normally, and 4 were negative. In the fourth series, with complete removal of the glands, 8 out of 11 pairs were negative and 3 had small litters. In the fifth series, in which the prostatic gland was removed in early life, it did not have any subsequent effect on the development of the testes. From experiments he deduces the following conclusions: 1. That a removal of the anterior lobes of the prostate gland in rats has no effect on breeding; but in a certain number it diminshes the fecundating power; and in a few it is destroyed entirely. 2. Complete excision has a very marked effect on fecundity, reducing it to almost nil when the gland is entirely removed. 3. Partial or complete removal of the prostate has no effect upon sexual desire and capacity. 4. Complete removal of the gland in the adult animal has no effect on the histological structure of the testicles. Complete removal of the prostate in the young animal has no effect upon the subsequent development of the testes.

75. **Uterine Fibroids.**—Jones advises early removal of fibroids and insists on their pathologic importance, even when small. Early operations are in most cases desirable; delay only increases the trouble and suffering.

76. **Diphtheria.**—Taylor insists on giving the benefit of the doubt to diphtheria where it can possibly be suspected, and the necessity of bacteriologic examination in every case. In dubious cases he always isolates for the protection of others, and only when the membrane brushes off and other and bacteriologic symptoms of diphtheria are absent does he diagnose follicular tonsillitis. A thin, serous, acrid nasal discharge which excoriates the lips, and frequent epistaxis accompanying constitutional symptoms indicate diphtheria, usually of a grave nature. He admits the existence of non-diphtheritic membranous laryngitis which may at times render the diagnosis difficult, but in any case give the benefit of the doubt in all cases of inflammation with pseudo-membrane in the larynx to diphtheria. The severity of post-diphtheritic paralysis appears to be altogether out of relation to the original condition. The paper concludes with elaborate instructions for antiseptic methods of treatment, etc.

77.—See abstract in THE JOURNAL of March 3, p. 593.

80. **Tonsillar Rheumatism.**—The close relation between certain forms of tonsillitis and acute rheumatism is well recognized, and Cobb considers it due to migration to the joints, synovial cavities, and endocardium by micro-organisms from the tonsils. He reports a case in which there was a latent or concealed tonsillar abscess which he thinks is not an at all rare condition, and often it assumes the form of a mild general sepsis or enlarged cervical glands.

81.—See abstract in THE JOURNAL of March 2, p. 592.

89. **The Toxemias of Pregnancy.**—The case reported, in the author's opinion shows that these toxemias may occur without diminution either in the amount of urine or urea, and that the ordinary examinaton of the urine, except for the presence of albumin which indicates of itself nothing imme-

diate or serious, does not disclose in all cases the existence or approach of a very serious malady which may terminate life.

102. **Pus in the Peritoneal Cavity.**—The method of treating suppurative diseases in the abdomen is discussed by Morris, who remarks on gauze packing, which he thinks poisons the patient, and the closing up of the incision. He says that after long-continued operations with large incision, free handling of the bowel and large drainage apparatus, patients are commonly very much depressed and some depression exists for several days. When the abdomen is closed completely he finds altogether another condition. The peritoneum takes care of all but the large collections of pus, and he has confined himself to disposing of these, leaving the rest for the so-called phagocytes, and closing the incision completely in most cases. In a small proportion of cases drainage may be necessary, but in most it is employed because the surgeon assumes a responsibility that really belongs to the leukocytes and for which they are well equipped, if the surgeon does not interfere.

103. **Gonorrhea in Women.**—The importance of gonorrhea as a cause of female disease forms the principal motive of Johnson's article.

104. **Organotherapy in Gynecology.**—The different organic extracts that have been employed in gynecology are reviewed by Krusen who summarizes the literature of the subject. He says, notwithstanding many brilliant results referred to, experience leads him to the following conclusions as regards the ovarian extract: 1. The employment of ovarian extract is practically harmless, as no untoward effects beyond slight nausea have been noted even when full doses have been administered. 2. In the treatment of amenorrhea and dysmenorrhea no good results were secured. (Although in some cases of amenorrhea of obesity, remarkable results have been obtained by the use of the thyroid extract.) 3. The best results were seen in the second class of cases, for the relief of symptoms of artificial menopause, when in a few instances the congestive and nervous symptoms were apparently ameliorated. 4. No appreciable result was noticed in the use of ovarin in the natural menopause. 5. No definite or exact reliance can be placed on the drug, as it often proves absolutely valueless where most positively indicated. 6. It is extremely problematic whether, in those cases in which relief was noted, the effect was not due to mental suggestion rather than to any physiologic action of the drug. The neurotic individual demanding this treatment will often be relieved by any simple remedy. 7. In those instances in which effects were noted, increase in dosage seemed to have little influence in maintaining the effect or preventing th patient from becoming accustomed to its use. 8. In conclusion, the theory which suggests the use of this extract seems to be at fault, and the administration of ovarin, or ovarian extract, is based upon a wrong assumption as to the function of the ovary. In organotherapy, the best results have been obtained from the use of the thyroid and adrenal glands, and the ovary in function is in no sense analogous to these organs. Its principal function is ovulation, and if any peculiar product is coincidently manufactured the isolation of this product has not yet been accomplished.

106. **Uterine Carcinoma.**—The radical treatment of carcinoma is here alone considered. Montgomery discusses the methods of hysterectomy and calls attention to the following special points: 1. An operation to afford hope of escape from relapse should be early. 2. The vaginal operation should have the preference wherever the conditions will permit of its performance. 3. Every precaution should be exercised to operate in healthy tissue and avoid the possibillity of reimplantation. 4. The prognosis is much less favorable in women under 35, quite favorable in women over 50, if an operation is done early.

116. **Laryngeal Papillomata.**—The frequency of symptoms, classification, etc., of laryngeal papilloma are discussed in detail. It seems to be more frequent in males, and one of the most important factors in its causation is the so called warty diathesis. Vocal strain has been considered a cause and syphilis is mentioned, also scrofula, tuberculosis, etc. The method of examination is given. The symptoms largely depend on the site occupied. The prognosis is usually good, although the point of attachment must be regarded. Every laryngeal growth should be removed if possible by the natural route. Some conservatism is still somewhat advocated and inhalation of formalin, alcohol and so on have been reported as giving good results. Fowler's solution seems to act well in some cases. The galvanocautery is neither scientific nor surgical, according to Quinlan, and its use should be limited. Major surgery of the part has its perils and may cause serious impairment of speech, but conditions may be promoted which may in every sense be palliative and at the same time insure radical means when the conditions are imperative. In conclusion, he mentions the possibility of change from benign to malignant growths and reports cases.

117. **Nasal Suppuration.**—In the majority of cases of nasal suppuration the presence of carious bone is the result of suppurative process and not its cause; the inflammation has extended from the superficial to the deeper-lying parts. The diseased bone may exist and there be no polypi. The variations in the anatomy of the parts may be a source of considerable perplexity, which is especially true as regards the frontal sinus. The author accepts Grünwald's theories of ozena as nearer the true solution than anything so far advanced. The focal point of suppuration in some one of the accessory cavities is the cause, and when this local disease is cured the attending symptoms also disappear. He has proved this to his own satisfaction in the cases he has observed. In attempting to relieve or cure the patient it seems best to take up each cavity separately, beginning with the antrum, which until recently has been the objective point of most of the surgical treatment. He thinks it is allowable to make an exploratory puncture through the inferior meatus for the detection of pus if transillumination and other methods fail. He would open both above and below in the canine fossæ and the inferior meatus, curetting granulations and washing out the cavity below. As regards the anterior ethmoidal cells he says these parts may be approached safely with the curette and forceps and unhealthy tissue cleared away. The use of the trephine or drill is not without danger even in expert hands. We may be obliged to remove the middle turbinate and other obstruction. The intimate associations with the frontal sinus often compel free exposure and breaking down intervening obstacles to secure good drainage through the whole extent. In the posterior ethmoidal cells and sphenoidal sinus more caution is to be observed. These may be opened by a strong curette and subsequent treatment by washing pursued. Considerable difficulty may be met with in advance upon the sphenoidal sinus, though patient probing will solve the problem. Careful scraping of the anterior wall and floor often produces decidedly beneficial results and Leonard quotes Myles who says he does not consider it safe to curette the upper and external walls of these sinuses.

119. **Adenoids.**—Gradle describes the method and a special instrument, a modification of Schuetz's adenotome, contrived by himself, which presses upward and backward and takes away the entire growth in one piece. He believes that this gives much more satisfactory results and can be employed without anesthesia, which he condemns in these methods excepting under unusual conditions.

FOREIGN.

British Medical Journal, April 6.

A Uterus which Contained One Hundred and Twenty Fibroids. J. BLAND SUTTON.—The writer reports the case of a woman, 34 years of age, who suffered from diffuse bleeding due to fibroids. The uterus was removed by laparotomy and the appendages left. It had a peculiar oval shape and he found four sessile fibroids in its cavity, as large as pigeon's eggs. The surface of the uterine wall was very thickly dotted over with small rounded fibroids, 120 altogether. In all that were examined the structure was similar. These could be described as bundles of plain muscle fibers twined around and immediately associated with the walls of the capillaries, giving the suggestion of the muscle coats of the

vessels as the source of growth. These minute fibroids were similar in structure with the large fully-developed growth. Each was globular and, on section, quite white, and was sharply differentiated from uterine tissue by a thin capsule from which it could be enucleated; this capsule was seen to be sharply differentiated in the stained sections when microscopically examined. Although he has examined carefully many hundred of uteri in the last sixteen years, he has never seen one similar to the specimen described, nor has he read an account of one in any way resembling it.

Placenta Previa. R. P. RANKEN LYLE.—The treatment recommended by Lyle, for placenta previa, is as follows: In cases of central or complete placenta previa the placenta is perforated with the fingers, version (if necessary) is performed, and a foot brought down, a tight abdominal binder applied, and the subsequent delivery left to Nature, unless the continuance of hemorrhage should necessitate slight traction on the foot. In cases of incomplete placenta previa, the treatment, with the exception of rupture of the membranes instead of perforation of the placenta, is identical. The advantages of version and bringing down the foot are: 1. It does away with the tampon and consequent danger of infection. 2. It allows early operation. 3. It arrests the hemorrhage with great certainty. 4. It gives time for the patient to rally. 5. It gives time for labor pains to set in and consequent natural dilatation of the cervix. 6. There is less danger of post-partum hemorrhage. In cases of placenta previa where the os is not sufficiently dilated to admit two fingers these should be converted into cases of the first or second class as described, and the vagina tightly plugged with boiled cotton wool and a tight abdominal binder applied until labor has advanced sufficiently to dilate the cervix and then to treat accordingly. No time should be lost in the treatment as soon as the diagnosis is made, as at any time severe and sudden hemorrhage may occur.

Diseases and Disorders of the Heart and Arteries in Middle and Advanced Life. J. MITCHELL BRUCE.—The third lecture on disorders and diseases of the heart and arteries takes up the subject of prognosis and treatment. It is always well to inquire after any family history of gout, rheumatism, or heart disease, and all the acute diseases should be looked after as well as the habits as to alcohol, tobacco, etc. The characters of the precordial impulse especially the seat of the apex beat and its strength are to be closely investigated. Weakness or absence of the impulse must never be disregarded. The precordial dulness must be mapped out and auscultation be employed to estimate the murmur, etc. The principal signs and symptoms are reviewed by the author. In the first place the mitral presystolic murmur is never significant of senile lesion. The arterial diastolic murmur, whether alone or combined with systolic murmur, shows that we have something more than atheroma, cardiovascular disease, or nervous disturbance and alcoholism and tobacco heart, even if one or more of these is present. Arterial incompetence developing in later life is the result of syphilis or acute and chronic valvular strain, though many instances met with after the age of 40 can be traced to juvenile endocarditis of rheumatic or other origin. While always serious it is especially so when due to syphilis or syphilis and strain. Fully developed basic systolic murmur, audible over the arterial area and manubrium and along the carotid, is a very common sign of atheroma of the aortic arch and valves and great vessels and also of syphilitic and traumatic affections of these organs, and should raise the suspicion of some degeneration in the coronary arteries and myocardial degeneration. An illy-developed basic systolic murmur is not uncommon in alcoholism, Bright's disease and nervous disorders, but it is difficult to disassociate it from anemia. The full-developed and audible systolic murmur in the mitral area, independently of leakage in cardiac failure, is usually traceable to rheumatic endocarditis, rarely to injury. Sometimes it may be due to valvular atheroma and attending sclerosis caused by gout, etc., and we must not overlook in these cases the possible association of coronary disease and fatty degeneration. If systolic mitral murmur is somewhat indefinitely affected by compensation and disappears under treatment, it is of no special value other than signfying relaxation and weakness and of disorderly action of the left ventricle consequent on any of the recognized causes of failure or disorder of the heart, including cardiac poisoning, acute disease, etc., and this, whether in a heart previously sound, or enlarged, or the seat of valvular disease. Accentuated ringing second sound in the aortic area or more extensively is of great value in the diagnosis of arterial tension and aortic atheroma, or both, but has too many other associations to be of much use in differential diagnosis. It should suggest careful research for Bright's disease. Slight reduplication of the first sound is common over a senile heart, strained in youth, and hearts degenerated by alcoholism, etc., but it is not unusual in other conditions. On the other hand, galloping rhythm, dennite doubling of the first sound, followed by slight accentuated ringing of the second sound, is practically pathognomonic of Bright's disease and one of the most valuable and ominous of physical signs. A normal-sized heart with irregular increased frequency and a variable systolic murmur in the mitral area is characteristic of tobacco poisoning. A heart enlarged on both sides and acting irregularly without murmur is, apart from cardiac failure, suggestive of strain in early life. The cardiac symptoms taken individually are of less value than the physical signs. No one symptom is pathognomonic. Palpitation is a nearly universal phenomenon of cardiac disease; faintness and fainting are not uncommon in cardiac strain, gouty heart and nervous disturbances; angina is met with in gout, tobacco heart, strain, especially after 40, syphilis, and alcohol, while pseudo-angina is extremely common in nervous women. The high tension pulse is most often met with in juvenile strain and nervous cardiac affections, while low tension pulse is connected with alcoholism and tobacco poisoning and senile strain. The prognosis of the different etiologic forms of heart trouble is noticed. In tobacco heart the prognosis is generally good. With alcoholism, however, the condition is much less favorable. If the disease be of recent development, and the condition uncomplicated and the treatment carried out faithfully, recovery may occur, but such cases are rare. Chronic Bright's disease, acute cirrhosis, etc., are common causes of death. Occasionally the end comes suddenly from fatty degeneration. The prognosis of gouty heart is rather difficult. Improvement under treatment may occur, but the condition of arrest can not go on indefinitely. In addition to the danger from Bright's disease, cerebral thrombosis, hemorrhage, bronchitis, and sudden failure of the heart from coronary degeneration are to be feared. Sudden death may occur in old gouty patients, not from the lesions of which a basic or systolic murmur is the evidence, but from associated coronary atheroma which probably was never suspected. In syphilitic lesions the prognosis is still more unfavorable. The condition of the heart from muscle strain is not, however, so serious. It is continuously liable to embarrassment during exertion, but old people often recover from conditions of distress from over-exertion. Cardiovascular disorder and disease from nervous strain pure and simple is amenable to treatment by complete and prolonged rest in the majority of cases, though death may sometimes occur. In any case of the presence of murmur in advanced life, together with cardiovascular degeneration, we must not forget the possibility of intercurrence of acute diseases, such as pneumonia, the prognosis of which is seriously modified by these conditions. In treatment one of the principal things is to correct the habits of the patient, discourage habitual drinking, and heart disease is an admirable argument to employ with some people for this purpose. Reference is also made to the prevention of cardiac strain. As regards the atheromatous process which depends upon toxemia and anemia, the obvious indication is to purify and enrich the blood and, besides personal hygiene, Bruce suggests arsenic and moderate doses of iodids combined with an excess of alkalies. The establishment and maintenance of compensation is, however, the great indication for treatment. Nutrition and activity of the myocardium are to be increased and sustained by specific cardiac stimulants and tonics of which strychnin, ammonia, and the digitalis group of drugs, with the blood remedies, are mentioned, also control of the nervous system and the employment of non-medicinal measures, such as active and passive

exercise and baths. He remarks that in many cases where the symptoms are alarming to the patient, such as depression, pain, small, irregular pulse, etc., there may be no failure of the myocardium, but only temporary embarrassment. The condition, however, is not to be neglected, but rest in bed, a carminative draught, calomel and saline purgatives, a digestible diet, and a little time are all the treatment required. When true failure occurs a different set of measures are demanded. The three great therapeutic indications are to reduce the peripheral resistance, increase the vigor of ventricular contraction, and rehabilitate hypertrophy, and remove arrears of work in the form of residual blood in the cardiac chambers, mechanical congestion of the veins and viscera and dropsy of the integuments and serous sacs. Bodily rest, a light solid diet, definite allowance of alcohol, if required, active purgation and sufficiently large doses of digitalis together with saline and other diuretics are the means calculated to obtain the best results. We must not be afraid to purge the patient, if necessary every morning. When the appetite flags or flatulence occurs a blue pill or a dose of calomel should be given and light solid foods instead of slops. Nocturnal restlessness and sleeplessness are to be met unhesitatingly, with permission to spend the night in an easy chair by the bedside: according to the author's experience, acupuncture and drainage succeed perfectly in these senile cases, as much as ten pints or more of serum escaping in the course of twenty-four hours, to the complete and often lasting relief of the circulation.

The New Type of Scarlet Fever from a Public Health Point of View. WM. ROBERTSON.—An epidemic of scarlet fever at Paisley has been traced by Robertson to the playgrounds, which have been taken advantage of by the children, and the swings and simple gymnastic appliances are credited by him with disseminating the disorder. While there is nothing better, if open-air spaces were more common their frequency would prevent very large collections of children, which has a direct effect in spreading contagious diseases.

The Lancet, April 6.

Existence of Immunity after Enteric Fever. BURTON A. NICOL.—Nicol attacks the idea that enteric fever produces immunity, and gives cases which bear out his opinion. He does not deny it, but holds that it is more doubtful than that produced by febrile disorders, such as smallpox, scarlet fever, etc. His experience in South Africa has led him to these conclusions.

Pathology and Treatment of Rheumatoid Arthritis. P. W. LATHAM.—Latham argues for the nervous origin of rheumatoid arthritis, and he finds no evidence in the post-mortem records that the spinal cord or ganglia have been thoroughly examined so as to justify the statement that these parts are healthy and free from organic change. He points to the neurotic character of the antecedents and accompaniments of arthritic trouble, the neurotic pain, weariness, numbness and tingling, and the migraine which Trousseau and Remak say often precedes the disorder, and the worry, anxiety and shock which are well-known antecedents. The atrophy of the muscles often develops more quickly than could be attributed to mere disuse. He quotes cases to show that injuries to the spine and brain, or any lesion of the nerves, are capable of developing similar symptoms. From all the data it is not unreasonable to assume that rheumatoid arthritis is due to spinal congestion or chronic myelitis chiefly affecting the ganglion cells of the anterior horns, but extending also, when the disease is associated with "glossy skin," to the ganglion cells in the posterior horns of the cord. Two cases are reported in full, and he suggests, in accordance with these views, that a continuous counter-irritation, employed in these cases, is a useful therapeutic measure.

Bulletin de l'Academie de Medecine (Paris), March 26.

Physiologic Aspect of Spinal Cocainization. J. V. LABORDE.—Several years ago Laborde published a monograph reporting extensive experimental research in regard to the toxic and physiologic action of cocain and its salts. He found one of the first effects to be a neuromuscular or motor hyperstimulation, keeping the animals tested in incessant, irresistible and uncontrollable motion—which explains the trembling and convulsive phenomena sometimes noted in man after its use. The analgesia following the administration of the cocain is localized at first, but spreads with the intravascular absorption, and induces marked vasoconstriction in addition to its specific action on the nervous elements by direct contact. This vasoconstriction is succeeded by vasodilation. The cardiorespiratory function becomes profoundly altered, passing from acceleration and irregularity to asphyxia complicated by convulsions in the fatal intoxications. These phenomena indicate that the cocain acts principally on the bulbar centers and that variations in the blood pressure co-operate in the functional disturbances. Other constant symptoms were vomiting and phenomena which could be explained only by assuming the existence of headache, from the extension of the action of the cocain to the cerebral centers. Injected under the arachnoid, the cocain moves with the cerebrospinal fluid at every movement of the patient, and finds its way to the medulla oblongata and even to the encephalon. This is demonstrated by the functional disturbances which result from its action on the medulla and brain, the vomiting, headache, tremor, cardiorespiratory syncope, etc., similar to the sequence observed in the experimental research. They render possible the gravest accidents and may terminate in death. Laborde concluded by protesting against Tuffier's assertion that heart disease and arteriosclerosis do not contraindicate spinal cocainization. The hypodermic method of cocainization which Reclus has used with success on 7000 patients without a single serious complication, and of which spinal cocainization is merely an offshoot, might be extended to the intramuscular or even the intra-abdominal injection of cocain, which would enlarge the field for operations, while avoiding the perils of the intraspinal route.

Echo Medical du Nord (Lille), March 31.

The Exclusive Milk Diet. SURMONT.—French physicians have unbounded confidence in the "absolute lacteal régime" and prescribe it in all cases in which the patient requires an easily digested food, substantial and yet not burdening nor irritating the alimentary canal; also in cases in which the intestinal fermentation must be reduced in order to diminish to the minimum this important source of organic autointoxication, and also when it is necessary to promote the urinary excretions and the elimination of toxins. Surmont states that the amount of milk should be about four liters a day for an adult, in conditions of repose or doing light work. The milk should be boiled, unless it is known to come from a cow which has passed the tuberculin test and is kept in disinfected quarters. It should be taken quite warm, at intervals of two hours, and sipped slowly, during ten or fifteen minutes. In case of marked gastric excitement, with a tendency to vomiting, the milk should be cold. An important precaution is to keep the mouth scrupulously disinfected. After each one of the eight meals of milk, the toilet of the mouth should be made with some alkaline solution such as sodium borate, to cleanse the mouth of all traces of the milk, which otherwise ferment and impair the appetite, while the noxious products are ingested with the next meal. The taste of the milk can be disguised with tea, coffee, chocolate, peppermint, chamomile, sage, sugar, salt or seltzer water, or it can be rendered effervescent, or be flavored with vanilla, orange-flower water, brandy, rum or other liquor when they are not contraindicated. By varying these flavors the patient can finally be induced to take the milk without addition. In certain cases of dyspepsia with abnormal fermentation, there is absolute intolerance for the milk at first, and the cream and upper part of the milk should be rejected and the balance mixed with 25 to 50 per cent. of an alkaline mineral water. In such cases Surmont begins with an energetic purge followed by plenty of water but no food for twenty-four hours, commencing then cautiously with the milk as above. The constipation that sometimes accompanies the milk diet can be combatted by a rectal injection of cold water once or, better still, twice a day, supplemented by a tablespoonful of linseed three times a day or other appropriate measures. Kefir sometimes substitutes milk to advantage or leads up to it.

La Gynecologie (Paris), January-February.

Non-Infectious Congestion and Sclerosis of Uterus. L. G. RICHELOT.—In the gouty or neuro-arthritic diathesis the connective tissue is the tissue of least resistance, and this tendency induces sclerosis in all the organs. The ovaries and uterus suffer with the others from this trophic lesion. The process is first a primary congestion followed by sclerosis and the final transformation of the uterus into a very large fibrous organ without fibromata. The process is not infection, and yet it is usually diagnosed and treated as metritis, the only effect being to aggravate the symptoms. The first stage is what has been erroneously called "virginal metritis," but in reality there is no infection nor inflammation, but always a history of delayed, difficult and irregular menstruation, with more or less backache, neuralgia, migraine, eczema, pains in the joints and a catarrhal discharge, apparently to compensate the inadequate flow of blood. In the next phase of the process the pains are more constant, the menses recur with abnormal frequency, and the losses of blood may entail anemia. But it is absurd to attribute the trouble to anemia and treat it accordingly, as iron and tonics merely exaggerate the evil. The pains are at times to be relieved only by reclining. The exacerbations of the congestion usually coincide with the menses, but frequently appear during the intervals, and are sometimes periodical, with or without a discharge of blood or mucus. This pseudo-menstruation betrays the influence of the nervous system. There is usually constipation, cystalgia and rectalgia. In the confirmed stage of this pseudo-metritis the uterus and its cavity are enlarged, the walls thick, but the mucosa is smooth, with no muco-pus. Curetting is worse than useless, except when the uterus contains fungous growths or mucous polypi. The process may have long periods of latency, but there is usually an exacerbation at about 40 years of age, in which the loss of blood and severe pains justify the most radical measures. At any stage of the process an infectious metritis may be superposed and its treatment is of course indicated, but the neuro-arthritic soil should never be forgotten. The latter is responsible for the relaxation of the fibrous tissue which may induce displacements of the uterus or prolapse, intestinal hernia, sinking of the kidney or other ptoses. It is also a favorable soil for the development of carcinoma in the sclerous uterus. The treatment in the first stage of this primary congestion is rest in bed. The young girl should stay in bed from the first day of the molimen until twenty-four hours after the last trace of blood has disappeared from the discharge. In the intermenstrual periods violent exercise, bicycling, horse-back riding and the abuse of dancing should be forbidden. Hydrastis, viburnum and piscidia erythrina are useful adjuvants, but are not equal to quinin sulphate, in the dose of 1 to 1.5 gm. Ergot has little value outside of the puerperium. In case of young married women, rest in bed is equally imperative, but it should be supplemented by vaginal injections of boiled water at 50 C., twice a day, taken in bed; five to ten liters, injected slowly, will arrest the congestion, hemorrhage and pain. Enemata with laudanum or antipyrin are also useful. The constipation should be relieved. Glycerin tampons applied to the cervix induce a serous secretion and relieve the congestion of the tissues. Massage is an illusion and is actually injurious in genuine metritis, but is extremely beneficial in these cases of congestion and pseudo-metritis. When done with skill and tact it proves a most beneficent measure in many cases. If hemorrhagic sclerosis requires cauterization, injections of zinc chlorid rank first. Hydrotherapy and water cures are beneficial with hot springs for cases with much pain. The seashore aggravates the tendency to congestion. Patients unable to leave home should take alkaline baths and dry frictions, and avoid tonics, especially iron, which ruins the stomach, favors constipation and overstimulates the nerves. In extreme sclerosis the dilatation of the cervix with laminaria tents will often prove effective, and in some cases will arrest serious hemorrhages. Supravaginal amputation may be required in certain cases and even vaginal hysterectomy, and it is better, Richelot thinks, to apply it at an early stage rather than to perform a series of less extensive operations.

Nouv. Iconographie de la Salpetriere (Paris), February.

Echinococcus Cysts in the Brain.—There are three separate illustrated articles on this subject. One case, reported from Gilles de la Tourette's service, was a man of 69, a day laborer, brought to the hospital in coma, his face congested, respiration stertorous, no hemiplegia, temperature 39.5 C. Death occurred in a few hours. He had occasionally had similar attacks, sometimes with convulsions, but had always apparently recovered in a few days; the attacks had always been attributed to drink. A hydatid cyst the size of an egg was found entirely included in the right hemisphere, which appeared normal in color and consistency. Auvray has collected 7 patients cured or improved in 16 similar cases operated on. In another, a girl of 17, who worked in the fields, suffered from headache and somnolence and at the autopsy nearly four hundred cysticerci of the tenia solium were found scattered through the encephalon, all in the gray matter. The patient had a history of a severe, almost fatal illness a year before, followed by comparative health. This illness may have coincided with the invasion of the centers by the parasite. No tenia was found in the intestines, but quantities of ascarides. The principal features of the third case, reported by Serieux, were cortical deafness, absence of paraphasia in spontaneous speech, paralexia, loss of comprehension of words read, impossibility to write, hallucinations in hearing and seeing, and epileptiform attacks. The patient was a man of 75, a forester. The autopsy showed a number of hydatid cysts disseminated superficially and with a certain symmetry in the temporal lobes, the Rolandic region and frontal lobes, all small. A fourth of the parasites were dead. The brain was the only organ affected by the echinococci.

Presse Medicale (Paris), March 30.

The Blastomycetes in Human Pathology and Serum Treatment. G. WLAEFF.—The virulence of blastomycetes can be enhanced by passage through animals the same as in the case of bacteria. They then appear under variable aspects, changing their size materially under the influence of certain media. They may induce in the animals septicemia, abscess, pneumonia, nephritis, pyelitis, cysts, carcinoma—in short, all the various pathologic processes from which they have been derived and isolated in man. With these blastomycetes Wlaeff found that it was possible to immunize birds and mammals and to obtain a serum possessing a specific action on malignant tumors in man. Numbers of writers have published instances demonstrating the large share of the blastomycetes in human pathology. Wlaeff conducted experiments on 510 animals with cultures of blastomycetes obtained from the Paris Pasteur Institute and the institute at Prague, and a culture isolated by Plimmer from a carcinoma of the mamma. He treated 40 cases of malignant neoplasm with the serum thus derived—his anticellular serum, as he calls it—from geese and asses immunized in the course of a year with pathogenic blastomycetes. There was an appreciable reaction, both local and general, to the injections of the serum in nearly every case. The intensity of the reaction and, in fact, the different clinical pictures induced by the blastomycetes, depend on the condition of the organs in each individual. Experimental research corroborates clinical experience that with virulent blastomycetes it is possible to induce all kinds of pathologic processes by modifying their virulence and by modifying at the same time the conditions of resistance of the subject or of various organs. The supposed coccidia observed by certain scientists are probably blastomycetes—this identity seems probable on comparison of the numerout cuts appended.

Congenital Alcoholism. NICLOUX.—This report of extensive personal research states that 10 per cent. of the alcohol ingested in the form of alcohol passes into the blood. Intoxication follows when 1 to 2 c.c. are ingested per kilogram, increasing to profound intoxication with 4 to 6 per cent., corresponding to 4 to 6 c.c. for each kilogram of weight. The alcohol also passes into the lymph, saliva, bile, urine and cerebrospinal, amniotic and pancreatic fluids and also into the milk. It is found in the latter in about the same proportion as in the blood. The blood of the fetus also contains the same or nearly the same

proportion as that of the mother. If the male organism is under the influence of alcohol, the semen is also impregnated with it, and in the female, the ovary and consequently the ovule.

April 3.

Physiology of Kernig's Sign. A. CHAUFFARD.—In the defective muscle-tone of tabes dorsalis there is no flexion of the knee. In normal conditions the knees are in slight, natural semiflexion, easily reducible. In the exaggerated muscle-tone of meningitis the flexion is exaggerated and not reducible without pain. The last, most pronounced stage of the flexion is the generalized contraction of tetanus. Kernig's sign can therefore be defined as a uni- or multi-regional contraction, affecting the predominating groups of muscles and occuring in the course of assuming a position which normally calls for this predominance, but in meningitis it is pathologically fixed in a painful and irreducible attitude. The sign is always a morbid phenomenon, but it is not necessarily localized exclusively in the knees. It is liable to be noted in the arms and to it is also due the rigidity of the back of the neck and the spine.

Semaine Medicale (Paris), April 3.

Alimentary Levulosuria in Connection with Liver Affections. R. LÉPINE.—Minkowski's experimental research on dogs, after ablation of the pancreas, and the work of others, have demonstrated that levulose is assimilated only when the liver is intact. This explains why it is tolerated only in certain cases of diabetes. A patient recently observed by Lépine, a woman in advanced cachexia, with complete impermeability of the common duct and consequent impairment of liver functions, was able to assimilate 150 grams of glucose without glycosuria, while 80 grams of levulose induced levulosuria. According to von Noorden and Strauss, icterus and other affections of the liver do not afford favorable conditions for the production of alimentary glycosuria. These facts also harmonize with the experimental observation that the tolerance for glucose is diminished very little in frogs that have had the liver removed. Our ideas in regard to alimentary glycosuria are becoming modified. It is no longer universally accepted as an indication of hepatic insufficiency, and the German writers mentioned above even deny it any value in the semeiology of the liver. It is possible that in some of the tests that have been reported, saccharose—a mixture of glucose and levulose—may have been used. In future, pure levulose should be used as a diagnostic measure for hepatic insufficiency.

Centralblatt f. Allgem. Pathologie (Jena), March 5.

Metastasis of Normal Thyroid Gland. H. ODERFELD.—A supposed sarcoma was removed from the forehead of a man 58 years of age. The tumor had developed in the course of three months and had attained the size of an egg. It was in the bone and the histologic structure was identical with that of the normal thyroid gland. No other pathologic manifestations could be discovered. In the only similar case on record, reported by Riedel, the tumor was in the lower jaw. Becker's case of a similar tumor in the supraclavicular fossa was probably an accessory thyroid gland.

Centralblatt f. Bakteriologie u. Infekt. (Jena), February 21.

Length of Life of the Plague Bacillus. N. K. SCHULTZ.—Some specimens of the plague bacillus sealed in tubes, protected from the sunlight, and kept in a cool place, had lost none of their virulence when the tubes were opened after four years. The preservation of the vitality seems to be favored by the contraction, shriveling and thickening of the protoplasm.

Artificial Immunity to Malaria with Euchinin. A. CELLI.—During the last four years Celli has been interested in nine persons living on the Pontine Marshes who were reputed to have a natural immunity to malaria, as none had ever contracted it. In 1900 one of these persons had a slight attack and another, a man of 34, had severe estivo-autumnal fever. Celli's experience in regard to natural immunity does not confirm that of Koch, as he knows of many regions where the people, either from poverty or prejudice, never take quinin, and yet the children do not acquire immunity in time, but suffer repeatedly from malaria in after years. The maximum mortality from malaria in Italy is between the ages of 5 and 20. He has been conducting extensive research on the hemolysins and antihemolysins in malarial blood, but it has proved practically useless. He anticipates better results from the use of certain drugs as a prophylactic measure against malaria. Quinin is not practicable for the purpose, he states, as few persons can tolerate the amounts required for effective prophylaxis. With euchinin, however, it is possible to accomplish the purpose without any inconvenience. In his extensive tests of the drug he found the effectual dose for adults to be .5 gram, and for children .25 gram, taken at one dose in the morning. The laborers on the Pontine Marshes, the Maremma and the plain of Catania took the euchinin for one to five months and experienced no gastric disturbances, ear symptoms nor disturbances of any kind from its use. Only 12 out of 116 thus treated, who had never had malaria, contracted it, while 172 of the 271 laborers who did not take it, became affected. Only 1 of 11 railroad employes treated with the euchinin showed any symptoms of malaria.

Centralblatt f. Gynekologie, March 9.

Spontaneous Hematoma During Pregnancy. W. STOECKEL.—In one of the two cases of spontaneous hematoma in the abdominal wall, which are described, the patient was in the ninth, in the other in the sixth, month of pregnancy. The hematoma developed suddenly while the patient was coughing, and caused violent pain at first. No similar case is recorded in the accessible literature, but the possibility of such an occurrence should not be forgotten in forensic cases.

Deutsche Med. Wochenschrift (Berlin and Leipsic), March 28.

Cholesterin the Vulnerable Substance in Red Corpuscles for Saponin. F. RANSOM.—Saponin will dissolve the corpuscles in dog's blood so that the solution remains perfectly clear and no precipitate is deposited in twenty-four hours. Ransom reports experiments which show that cholesterin is the substance in the corpuscles which is affected by the saponin. Further research showed that cholesterin binds the saponin and will annul the toxicity of the latter. The same substance, therefore, which attracts the saponin to the red corpuscles and thus induces their destruction, when free in the serum, binds and annuls its toxic action. This research is the first successful attempt to isolate from a tissue the vulnerable substance, and demonstrate that the same substance can and does serve as an antitoxin under other circumstances.

Stenosis of the Pylorus in Infants. HUEBNER.—Stenosis of the pylorus may appear so early that it is liable to be diagnosed as congenital. The symptoms are incessant vomiting, almost complete constipation and scanty urinary secretion. Peristaltic waves can be observed in the moderately dilated stomach. Huebner has observed eleven such cases. The infants fall into inanition, but in spite of the threatening symptoms he does not advise operating for this spastic stenosis. When the child was well tended and no hospital infection intervened, all recovered after two months or thereabouts, sometimes longer. The infant is fed as usual, only at longer intervals, and the parents are told that the vomiting and emaciation will probably continue for a long time but will then gradually subside. The little that is retained by the child is digested. He applies warm cataplasms to the stomach several times a day, irrigates the intestines and sometimes supplements these measures with small doses of opium. He has never observed any benefit from lavage of the stomach in these cases.

Operation for Hemorrhage from Gastric Ulcer. STRAUSS.—Examination of six cases of fatal hemorrhage from the stomach showed that in none of them could operative measures have had a chance of success. In case of suspected transformation of an ulcer into a carcinoma, an important differentiating point is the determination of metastatic nodules in Douglas's pouch, palpated through the rectum, or of similar nodules in the thorax by radiography. These measures should never be neglected in dubious cases. An ulcer is seldom cured; it merely enters on a phase of latency in the apparently cured cases. By the abundant use of the fats of milk the tendency to hyperacidity can be combatted. This is especially useful in

cases of motor insufficiency, to substitute the readily fermenting carbohydrates. In a recent case of motor insufficiency with a history of gastric ulcer and hemorrhage at one time, the acute hypersecretion had dried out the tissues and induced such weakness of the heart's action that salt solution was injected to enable the patient to live until the next morning when the operation was planned to relieve the motor insufficiency. But the next morning the entire syndrome of stenosis of the pylorus had vanished. Strauss can explain this phenomenon only by the assumption that the obstruction had been due to some adhesion, cicatricial fibers or kinking, which had become broken or straightened during the ride to the hospital. During the two years that have elapsed since, the patient has returned twice with symptoms of motor insufficiency, cured each time by several weeks of a diet of albumin and fats.

Stain for Elastic Fibers in Sputa. L. MICHAELIS.—Weigert's stain for elastic fibers consists of fuchsin, resorcin and ferric chlorid. Michaelis has found that a number of other stains are equally effective, although the color varies when fuchsin, thionin or cresyl violet RR or safranin or methyl violet is combined with the resorcin. With fuchsin and resorcin for instance, the elastic fibers are stained a dark violet while all other fibers are colorless. The thick, suspicious portion of the sputum is spread evenly between two object glasses and dried in the air. They are then placed in a cylindrical vessel containing the stain, which can be used again and again. After one half-hour the specimen is rinsed with water and treated with 3 per cent. hydrochloric alcohol until the stain has almost entirely disappeared. A drop of cedar oil is then spread over the entire object glass. By this simple technique it is possible to determine the presence of elastic fibers in the sputum in the incipient stages of tuberculosis. In bronchitis there is no element in the sputum which reacts like this to the stain. This technique has given great satisfaction wherever used; it absolutely differentiates the elastic from all other fibers, and has afforded interesting information in regard to the arrangement of the elastic fibers in the lungs in advanced cases of phthisis.

April 4.

Galvanocaustic Occlusion of Vessels in Intranasal Operations. ORTMANN.—For several years Ortmann has made a practice of galvanocaustic occlusion of the vessels supplying the parts, as a measure preliminary to certain operations on the nose. By this means the operation can be performed without the loss of a drop of blood to obscure the field. It is especially useful in the removal of portions of the inferior turbinate, and of the horizontal margins of the bone or cartilage, and also in case of hemorrhage from the septum.

Acute Yellow Atrophy of the Liver Terminating in Recovery. ALBU.—In 1892 Wirsing was able to collect only 15 cases of acute yellow atrophy of the liver in which there was no history of syphilis and the patients recovered, and only two have been reported since. Albu reports another case free from syphilitic antecedents. The patient was a young man on his wedding trip, previously robust, but three weeks before his marriage symptoms of icterus had appeared after a series of violent emotions. The fever continued for nearly two months, with five apparent crises, when the patient perspired and the temperature dropped. The symptoms presented the classic picture of yellow atrophy of the liver, but the patient gradually recovered, except for slight icterus, in the course of three months, and the icterus also disappeared in another month, with complete return of strength. Examination of the metabolism on the fifth day of the disease showed that the nitrogen in the urea formed 75 per cent. of the total of 8.109 grams of nitrogen in 890 c.c. of urine one day, and the next, 85 per cent. of the total of 6.692 gm. of nitrogen in 980 c.c. of urine.

Jahrbuch f. Kinderheilkunde (Berlin), March 1.

Wandering Kidney in Infancy. W. KNOEPFELMACHER.—Hollederer has stated that he found a wandering kidney in five out of a hundred children he examined, and each of the five was more than 12 years of age. In this article it is asserted that the kidneys of infants only 2 or 3 months old can be easily palpated through the rectum; at least the lower third or half can be thus palpated. The right kidney is more accessible than the left. The kidney is larger in nurslings in proportion to the length of the trunk, and they extend farther down than in adults. The hilus of the kidney in the adult is on a line with the first to the second lumbar vertebra, but in the newly-born, with the second vertebra. These organs are more movable than in the adult and there is some respiratory mobility. In two cases, one an infant 9 and the other 4 months old, unilateral wandering kidney was noted and the liver and spleen were also abnormally movable. The latter, however, should not be regarded as a sign of congenitally misplaced kidney.

Affections of Spinal Cord in Inherited Syphilis in Nurslings. R. PETERS.—In 11 cases Peters has observed a sudden paralysis appear in infants of 2 to 3 months, indicating a lesion in the spinal cord with the brain intact. The paralysis affected the upper or lower limbs, or both, and was usually accompanied by a characteristic attitude of the hands resembling the position of the flippers of a seal, only more extreme. The forearm was in marked pronation, the back of the hands turned inward and the palms outward, the joint flexed and adducted to the body. He calls this the "Flossenstellung," or flipper position, and observes that it was prominent in 9 of his 11 cases. In 4 there were other manifestations of inherited syphilis and in 5 the parental history was suspicious, but in 2 there was absolutely nothing in either parents or children to suggest syphilis, and yet all recovered almost immediately after the institution of specific treatment. All the symptoms indicated the peripheral nature of the affection, and he suggests, as a plausible assumption, the possibility of a syphilitic arterial affection with disseminated foci of softening and eventual induration, a condition analogous to that described by Charcot, in adults, as *état tigré*. Inunctions of gray ointment were borne well by the children and the cure was complete with ten on an average, although a few required as many as thirty. Calomel and potassium iodid were administered to the mother at the same time. The daily dose of .5 gram of gray ointment for ten days was rubbed into one child in one day by a mistake, but he experienced no ill effects and recovered with unusual rapidity. Improvement was usually marked after three inunctions.

Muenchener Med. Wochenschrift, March 26.

Experimental Production of Cirrhosis of the Liver. MARCKWALD.—Frequent injections of small amounts of antipyrin in frogs, rabbits, etc., induced cirrhosis of the liver as the reaction of the organism to a primary destruction of the liver cells. Injections of large amounts caused acute destruction of the organ. Comparing this action of antipyrin with that of other agents which we know cause cirrhosis of the liver, and comparing the anatomic findings with those observed in the human cirrhotic liver, it seems reasonable to assume that alcohol or any agent capable of causing the destruction of the liver cells, induces cirrhosis of the organ in case of chronic action unless the latter is prevented by some obstacle outside of the liver.

Natural Immunization of Tuberculous Families. A. REIBMAYR.—Bacterial and malarial diseases confer in time more or less immunity which is not restricted to one generation but may be inherited by succeeding generations. This law applies also to chronic affections like tuberculosis, and the genealogic study of tuberculosis is, Reibmayr thinks, the surest way to throw light on obscure problems. He points out the changes in the constitution observed in families who have struggled with tuberculosis for generations, and states that the prophylaxis of the disease should be sought in the maintenance of the fund of immunity derived by inheritance from preceding generations and the increase of this resistance by hygienic and other measures.

April 2.

Childbirth with Deformed Pelvis. W. ALBERT.—The principles of the treatment of childbirth in a narrow pelvis are summarized by Albert as follows: In case of primiparæ with a conjugata vera of 7 to 9.5 cm., a spontaneous birth should be anticipated and promoted; with multiparæ, version should be done, bearing in mind the possibility of a spontaneous

birth. The colpeurynter is especially valuable in this group of cases, and with the bag of waters intact, affords the most favorable conditions for success. If the waters have escaped, the colpeurynter can be introduced inside the uterus and its tube used for traction. As soon as the fingers can reach the fetal mouth, the position of the woman is changed from the dorsal with flexed limbs, to the Walcher position with limbs pendent. One writer claims that the results for the children have proved successful in 20 per cent. more cases than before the introduction of the Walcher position into practice. Multiparæ are treated the same, unless the head refuses to come down after the cervix is fully dilated, in which case version and immediate extraction follow. These principles have been the guide at the Dresden clinics and 81.3 per cent. of the children were dismissed living; only 1 of the 60 patients treated with version and extraction according to these rules died. There was a rupture of the uterus in this fatal case. Chrobak has reported 6 deaths in 133 women treated by version and extraction, with only 48.9 per cent. living children. Braun-Herzfeld reports 2 deaths in 89 patients thus treated, with 70.7 per cent. living children. Leopold and Rosenthal report 2 deaths in 102 cases, with 68.4 living children, and Leopold and Loehmann, 3 deaths in 70 cases, with 64 per cent. living children. The statistics at Dresden are therefore more favorable than any of the others in respect to both mothers and children. The colpeurynter protects or after rupture substitutes the bag of waters.

Manipulative Treatment of Congenital Luxation of the Hip Joint. C. GHILLINI.—The aim sought is to bring the head of the femur into the spot where the socket ought to and would be in normal conditions. If the head is pushed up beyond it, the femur is twisted into exaggerated abduction. If it is below the proper point, it is twisted in adduction; if pushed forward, it is twisted inward, and outward if pushed backward. In more than a hundred cases thus treated, many of them bilateral, the results have been very satisfactory. The head of the femur is maintained for six months to a year in contact with the spot where the normal acetabulum should be, and the result is the formation of a new joint. It does not anatomically resemble a normal joint but has the same functions.

Queries and Minor Notes.

SECRETARY OF OREGON BOARD.

DETROIT, MICH., April 9, 1901.

To the Editor:—Please give me the name and address of the Secretary of the State Board of Medical Examiners of Oregon.

R. P.

ANS.—Dr. Byron E. Miller, 401 Dekum Bldg., Portland, Ore.

STATES NOT REQUIRING EXAMINATIONS.

UTICA, N. Y., April 14, 1901.

To the Editor:—Will you kindly inform me what states do not require examination for practicing medicine, simply registering a diploma from a recognized school in good standing. "M. D."

ANS.—This question was answered in THE JOURNAL of April 13, p. 1081.

U. S. MEDICAL SCHOOLS.

PINE BLUFF, ARK., April 2, 1901.

To the Editor:—Will you kindly inform me where I can procure a list of recognized, reputable medical schools in the United States?

A. C. J.

ANS.—Write to Dr. Bayard Holmes, of this city, Secretary of the Association of American Medical Colleges, 103 State St., Chicago, and to Dr. Chr. Tompkins, Richmond, Va., Secretary of the Southern Medical College Association, for the information required.

SCHOOLS FOR THE FEEBLE-MINDED.

EVANSTON, ILL., April 19, 1901.

To the Editor:—Will you kindly give me information as to, or recommend, some school for the care of the feeble-minded, not necessarily in, but easily accessible to Chicago? N. J.

ANS.—See THE JOURNAL of April 13, p. 1081. There is such a school at Kalamazoo, Mich., under the management of Dr. C. T. Wilbur, formerly superintendent of the Illinois State Asylum for the Feeble-Minded; also one at Godfrey, Ill., known as the "Beverly Farm" Home and School for the Feeble-Minded, Dr. W. H. C. Smith, superintendent.

PHYSICIANS AND THE AUTOMOBILE.

PHILADELPHIA, April 8, 1901.

To the Editor:—I began to use the automobile in June last, and from the very beginning of my experience have employed it in my daily work. I estimate a mileage of 5000 to 6000 on this my original carriage. It is of the hydrocarbon or gasolin type. I am more strongly convinced than ever that this is *the* system. A few of its advantages over steam may be incidentally noticed. It may be started at an instant's notice—a turn of the crank and you are off. Having reached your destination the current is turned off. You may stop an instant or you may stop indefinitely. A turn of the crank and you are ready to start again. Incidentally that means saving of fuel. Economy of fuel is another thing. At a liberal estimate steam uses twice as much. The system is safe, simple and reliable. It can be operated at all seasons, while steam is not suited to zero weather, for some of the pipes will freeze up. I am convinced that the immense superiority of the hydrocarbon system will be fully demonstrated in the near future.

A word regarding difficulties I have experienced: 1. Bad wiring gave me much annoyance at the start. A liquid battery was dirty and sloppy. The dry cell has been found reliable. 2. Pneumatic tires. The heavy machines are equipped with single-tube tires. Repair in case of puncture is difficult, sometimes impossible, and punctures will sooner or later occur. My first set of tires gave out after three months of use, and they were replaced by the maker. The second set gave better results; both rear tires have recently been punctured. Removal from the rims is necessary in order to have a repair made. This involves expense of time and money and occasionally failure to effect a repair. The seriousness of this failure must be evident when it is remembered that the outlay for a single tire is a little over $40. The use of double-tube or clincher tires on the lighter and medium weight wagons promises a solution of the trouble. Experience demonstrates that punctures occur more than twice as often on the front wheel as on the rear wheel. A puncture in a double tube can be repaired in a few minutes, while the repairmen want two or three days, sometimes longer, to repair a single tube. In case of a cut the process of vulcanizing a single tube may be impossible; if a double tube, no matter how extensive the cut, it can always be vulcanized.

Aside from a few defects of material and poor assembling my other troubles were the result of my own inexperience.

That the automobile is capable of taking the place of the horse for our daily use, I fully believe; indeed, it is able to fill the place of three horses. It may be kept on one's own premises, and gotten under way in as short a time as is required to mount a bicycle. The advantages of this must be at once manifest.

As to the amount of attention required, a man or an intelligent boy is quite necessary. In addition to the attention he may give I would urge a personal supervision of all the details of the machinery, lubrication, etc. One should have everything in perfect order by attending to the little things, e. g., tightening loose bolts and nuts, and, finally, operating one's own machine. The chances are you will then get home every time. Nor will you be compelled to make wayside demonstrations to idle, curious and sometimes impertinent onlookers. One of my friends in this city has driven one of these same wagons over 13,000 miles in the last two years, and to the complete exclusion of horses. His repair bills have not amounted to a hundred dollars in the last year. I am told by his repairman that "Dr. —— never breaks anything." The doctor who has some mechanical taste and who likes such things may safely buy an automobile now. Let it be a hydrocarbon or gasolin machine and, preferably, unless he has money to burn, a second-hand one.

DANIEL LONGAKER, M.D.

A NEW CURE AND A COMMENT.

We recently received a piece of medical literature in the shape of a little pamphlet in which is reported "A Case of Gastric Carcinoma," successfully treated by a certain drug, let us call it sodium chlorid. The pamphlet in question, as the man said about the play, is so shockingly bad that it is good. There is a frankness about the writer that is refreshing. Without any preamble he tells us, in a plain straightforward manner, why he reports the case; the first reason being that gastric cancer is not a disease of frequent occurrence, and that possibly he would never see another case. The second is that he had such good results that he wanted others to know of his method of treating this generally supposed-to-be-fatal disease. So, too, in his clinical history of the case the author goes directly to the point and asserts boldly that this was a case of carcinoma of the stomach. He wastes no time in useless inquiry into the family history, previous illness of a similar or different character, nor does he annoy the reader with any question about differential diagnosis, whether jaundice, for instance, might have indicated gall-stones or whether the swelling might possibly have been a distended gall-bladder.

The patient, an adult male, had symptoms of gastric catarrh, for which the Doctor had been treating him for a few weeks, when one day the appearance and expression of the face suggested malignant disease, and it occurred to the physician that an examination would be in order, and, as a result of this examination, a smooth, hard, round tumor was felt "in the position occupied by the pylorus." We are told there was some vomiting and some blood found in the vomitus and stools, and hence the diagnosis, cancer of the pylorus. The patient refused consultation. Under the use of the drug in question the vomiting ceased, also the yellow tint of the eye and skin disappeared, etc. We might think the Doctor a little rash in his diagnosis, or hasty in arriving at conclusions, but we are distinctly told that this is not his characteristic manner of doing things. Thus on a certain day he reduced the dose to

4 minims and combined with it tincture of chlorid or iron, his only reason for reducing the dose being "to take time to deliberate as to the further course I should pursue in the case." We are told that there was a gradual gain in the patient's weight and strength and a diminution in the size of the tumor. In the end this tumor could not be felt and the writer, after speculating as to the manner in which the drug had caused the cancer to disappear, concluded that the action of the remedy is not only local but constitutional, and "it will prove efficacious in all cases of carcinoma wherever situated."

We laugh at the absurdity of the whole thing. We condescendingly pity the credulity, if nothing more, of the author; we are indignant that such stuff could even pretend to pass as medical literature; in disgust we toss this travesty on science into the waste-basket. And then as we pick up an article recently received for publication, and as we read it it dawns upon us that even in this paper before us are examples of conclusions based on a limited experience, of bold statements made with no consulting of authorities, of superficial observations, of misrepresentation of facts, of sweeping generalizations utterly unwarranted by the phenomena described, of strangely illogical processes of reasoning, and yet we find that the author of this article is not an obscure, humble country practitioner, but a man well known, a voluminous writer who appends titles to his name and assumes to be a leader of young physicians, for he is a professor in a medical college. With a more tender charity we pick the pamphlet from the waste-basket and place it on the shelf of curiosities to repose side by side with the one which tells of the condurango cure for cancer, of Bergeon's, and hundreds of other cures for tuberculosis, of the cure of all chronic ailments by operation on the rectum, of elaborate descriptions of microbes which turned out to be something else or nothing at all, merely artefacts, of the multitudinous operations on women for the relief of fancied or real aches and pains, and we say to ourselves as we squeeze the little booklet in between two ponderous volumes each with a well-known name upon its back: No, rural colleague, your sin is as much less than theirs, as your volume is smaller, your influence less far-reaching and your faults more glaringly manifest."

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., April 4 to 10, 1901, inclusive:

Charles B. Ewing, captain and asst.-surgeon, U. S. A., now on duty at the Santa Mesa Hospital, Manila, P. I., is detailed as a member of the board to investigate tropical diseases.

Charles W. Farr, lieutenant and asst.-surgeon, U. S. A., recently appointed, from Elmira, N. Y., to Fort Reno, Okla., for post duty.

Francis M. McCallum, captain and asst.-surgeon, Vols., from Fort Reno, Okla., to San Francisco, Cal., en route for service in the Division of the Philippines.

George J. Newgarden, captain and asst.-surgeon, U. S. A., on the expiration of his present leave of absence, will proceed to Fort Mason, Cal., for post duty.

Navy Changes.

Changes in Medical Corps of the Navy for the week ending April 13, 1901:

Medical Director W. K. Scofield, detached from special duty at Philadelphia, April 27, and ordered home to wait orders.

Medical Director W. G. Farwell, detached from the Philadelphia Navy Yard, and ordered to duty in Philadelphia, special.

Surgeon C. Biddle, ordered to the Philadelphia Navy Yard, April 27, as relief of Dr. Farwell.

Surgeon S. H. Griffith, ordered to duty at the Pan-American Exposition, Buffalo, April 25, in charge of exhibit of Bureau of Medicine and Surgery, Navy Department.

Asst.-Surgeon R. B. Williams, detached from Pensacola Navy Yard, and ordered to Key West Naval Station, with temporary duty at Dry Tortugas.

Medical Inspector J. R. Waggoner, detached from Naval Hospital, Cavite, and ordered to Mare Island Hospital, having been condemned by a medical board of survey.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the 14 days ended April 11, 1901:

Surgeon C. E. Banks, granted leave of absence for six days from April 15.

Surgeon J. J. Kinyoun, relieved from duty at San Francisco, Quarantine, and directed to proceed to Detroit, Mich., and assume command of the service. Granted leave of absence for fifteen days.

Surgeon T. B. Perry, department letter of March 2, 1901, granting Surgeon Perry leave of absence for thirty days, amended so that said leave shall be for 20 days.

P. A. Surgeon J. B. Greene, relieved from duty at Berlin, Germany, and directed to proceed to Washington, D. C.

P. A. Surgeon L. E. Cofer, designated as chief quarantine officer of the Territory of Hawaii, relieving Surgeon D. A. Carmichael.

Asst. Surgeon Hill Hastings, to proceed to Santa Barbara, Cal., for special temporary duty.

Asst.-Surgeon C. H. Lavinder, bureau telegram, granting Asst.-Surgeon Lavinder leave of absence for ten days, amended so that said leave shall begin April 1, instead of March 27.

Asst.-Surgeon S. B. Grubbs, granted leave of absence for seven days. Upon expiration of leave, to proceed to Washington, D. C., and report at Bureau for duty.

Asst.-Surgeon L. L. Lumsden, upon departure of Surgeon J. J. Kinyoun, to assume temporary command of San Francisco quarantine station.

Asst.-Surgeon Edward Francis, to proceed to New York, and report to medical officer in command, Immigration Depot, for duty.

A. A. Surgeon G. H. Altree, granted leave of absence for four days from April 10.

Hospital Steward and Chemist Henry Gahn, to assume temporary charge of Purveying Depot during absence of medical purveyer.

Hospital Steward F. L. Brown, relieved from duty at Boston, Mass., and directed to proceed to Cape Charles quarantine station and report to medical officer in command for duty and assignment to quarters.

Hospital Steward F. H. Peck, to proceed to San Francisco, Cal., for special temporary duty.

PROMOTION.

Asst.-Surgeon H. S. Mathewson promoted and appointed passed-assistant surgeon to rank as such from April 7.

APPOINTMENT.

J. A. Moncure reinstated and appointed acting assistant-surgeon, U. S. Marine Hospital Service, for duty at the Gulf quarantine station.

Surgeon D. A. Carmichael, relieved from duty at Honolulu, T. H., and directed to proceed to San Francisco, Cal.

Surgeon C. T. Peckham, granted 20 days' additional leave of absence on account of sickness.

Asst.-Surgeon Hill Hastings, to proceed to Bakersfield, Cal., for special temporary duty.

Asst.-Surgeon M. J. White, to report to Surgeon J. H. White for duty.

Asst.-Surgeon W. C. Billings, to proceed to San Francisco, Cal., for special temporary duty.

Asst.-Surgeon D. H. Currie, to proceed to San Francisco, Cal., for special temporary duty.

A. A. Surgeon R. S. Primrose, granted leave of absence for five days from March 30.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ended April 12, 1901:

SMALLPOX—UNITED STATES.

California: Los Angeles, March 23-30, 1 case; Oakland, March 16-23, 1 case; San Francisco, March 23-30, 7 cases.
District of Columbia: Washington, March 30-April 6, 2 cases.
Florida: Jacksonville, March 30-April 6, 19 cases.
Illinois: Chicago, March 30-April 6, 9 cases.
Indiana: Evansville, March 23-30, 1 case; Terre Haute, March 18-25, 1 case.
Iowa: Clinton, March 30-April 6, 1 case; Ottumwa, March 16-23, 1 case.
Kansas: Wichita, March 30-April 6, 17 cases.
Kentucky: Lexington, March 30-April 6, 8 cases.
Louisiana: New Orleans, March 30-April 6, 8 cases, 2 deaths; Shreveport, March 23-April 6, 4 cases.
Michigan: Detroit, March 30-April 6, 3 cases; West Bay City, March 30-April 6, 2 cases.
Minnesota: Minneapolis, March 30-April 6, 20 cases.
Nebraska City, March 2-23, 7 cases; South Omaha, April 1-6, 6 cases.
New Hampshire: Manchester, March 30-April 6, 6 cases.
New Jersey: Newark, March 30-April 6, 2 cases.
New York: New York, March 30-April 6, 42 cases, 8 deaths.
Ohio: Cincinnati, March 29-April 6, 3 cases; Cleveland, March 30-April 6, 35 cases, 2 deaths.
Pennsylvania: March 30-April 6, McKeesport, 1 case; Philadelphia, 1 death; Pittsburg, 3 cases; Steelton, 1 case.
Rhode Island: Riverpoint, March 10-April 8, 5 cases.
South Carolina: Charleston, April 2, a few cases.
Tennessee: March 30-April 6, Memphis, 22 cases, 1 death; Nashville, 14 cases.
Utah: Salt Lake City, March 30-April 6, 28 cases.
Virginia: Roanoke, March 1-31, 71 cases, 4 deaths.
West Virginia: Wheeling, April 1-8, 2 cases.
Wisconsin: Green Bay, March 31-April 7, 2 cases.

SMALLPOX—FOREIGN AND INSULAR.

Argentina: Buenos Ayres, Feb. 1-28, 37 cases, 21 deaths.
Austria: Prague, March 8-23, 7 cases.
Belgium: Antwerp, March 8-16, 3 cases, 1 death.
China: Hongkong, Feb. 23-March 2, 9 cases, 7 deaths.
Egypt: Cairo, March 4-11, 1 death.
France: Paris, March 16-23, 6 deaths; St. Etienne, March 1-15, 1 case.
Great Britain: England—Bradford, March 8-23, 3 cases; Liverpool, March 16-23, 2 cases; Southampton, March 16-23, 1 case. Scotland—Glasgow, March 22-29, 11 deaths.
India: Bombay, March 5-12, 10 deaths; Calcutta, March 2-9, 85 deaths; Karachi, March 3-10, 12 cases, 4 deaths; Madras, March 2-8, 11 deaths.
Mexico: Progreso, March 22-29, 8 cases.
Netherlands: Rotterdam, March 23-30, 2 cases.
Russia: Moscow, March 8-16, 4 cases 3 deaths; Odessa, March 8-23, 13 cases, 3 deaths; Warsaw, March 8-16, 9 deaths.
Spain: Malaga, March 1-15, 2 deaths.
Switzerland: Geneva, March 2-9, 1 case.
Philippines: Manila, Feb. 16-23, 1 death.
Porto Rico: Ponce, from beginning of epidemic to March 15, 132 cases.

YELLOW FEVER.

Costa Rica: Port Limon, April 6, 1 case.

CHOLERA.

China: Hongkong, Feb. 23-March 2, 6 deaths.
India: Bombay, March 5-12, 4 deaths; Calcutta, March 2-9, 26 deaths.
Straits Settlements: Singapore, Feb. 2-23, 1 death.

PLAGUE—FOREIGN AND INSULAR.

China: Hongkong, Feb. 23-March 2, 7 cases, 6 deaths.
India: Bombay, March 5-12, 1,196 deaths. Calcutta, March 2-9, 537 deaths.
Philippines: Manila, Feb. 16-23, 7 cases, 6 deaths.